DOCUMENT RESUME

ED 369 984 CE 066 524

AUTHOR	Robinson, Charles W.
TITLE	Using the Dictionary of Occupational Titles in Career Decision Making: A Self-Study Manual.
INSTITUTION	Wisconsin Univ.-Stout, Menomonie. Stout Vocational Rehabilitation Inst.
REPORT NO	ISBN-0-916671-89-5
PUB DATE	94
NOTE	142p.
AVAILABLE FROM	Materials Development Center, Stout Vocational Rehabilitation Institute, School of Education and Human Services, University of Wisconsin-Stout, Menonomie, WI 54751 ($24).
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Career Counseling; Career Development; *Career Planning; *Disabilities; Guidelines; *Occupational Information; Postsecondary Education; Resources; Units of Study; *Vocational Rehabilitation
IDENTIFIERS	*Dictionary of Occupational Titles

ABSTRACT

This self-study manual was designed to help people who work in rehabilitation, education, and other helping professions to use the Dictionary of Occupational Titles (DOT) to assist persons with disabilities in preparing for and locating appropriate employment. The manual has four main sections: (1) a preface and introduction that explain how it will help counselors and teachers in their job, how it is organized, and what materials are needed; (2) an explanation of how occupational information is related to and important in vocational rehabilitation and career and special education--including the theory of work adjustment, the process of comparing people to jobs, and a complete description of the contents of the DOT with exercises that apply occupational information to case practice; (3) a section that discusses the eight worker trait areas and their application to career decision-making; and (4) appendixes that contain definitions, answers to exercises, background information, models, and sample data from the DOT. Units within each section consist of unit objectives, an introduction, information sections, and exercises. (KC)

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Using the Dictionary of Occupational Titles in Career Decision Making:

A Self-Study Manual

by
Charles W. Robinson

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ISBN: 0-916671-89-5

ACKNOWLEDGMENTS

In the fifteen years since the first edition, hundreds of students have provided the encouragement needed to undertake this revision. Sometimes the encouragement was rather backhanded, as in "I hated doing that manual, but have to admit I learned how to use the DOT, something that has really proved useful." More often, however, students have reported regular use of the structure taught in the manual to analyze work history and assist persons making career decisions, "..the process I use every day to do my job."

This second edition, like the first, has been the work of many people. Martie Robinson and Heather Robinson typed the original manuscript, struggling valiantly with my penmanship. Peggy Bond made a major contribution in organizing the final version and making sure that everything was in the right place and made sense.

Special thanks to the 1993 students on the Concord, NH, Campus of Assumption College. They completed the revised manual for the first time, found the inconsistencies, and made very useful suggestions for improvements.

Finally, my appreciation to the staff at the Materials Development Center, first for their encouragement to undertake the project and then for their assistance with final editing.

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Section One

Getting Started

PREFACE

Welcome to the world of occupational information and the DOT! DOT does not refer to the Department of Transportation road signs but to the Dictionary of Occupational Titles. It is THE authoritative source for occupational information. Collected by the U.S. Department of Labor, it is the one publication to which all other occupational information publications refer. This self-study manual teaches effective use of the DOT.

Before we get started, however, you may have questions about the manual:

1. How will it help me in my job?
2. How is the manual organized?
3. What materials will I need?

How will this Manual Help me in my Job?

The manual was created for people who work in rehabilitation, education, and other helping professions. Whether you assist people of school age or working age, the question "What will I do for work?" is often heard. Whomever responds must know about and be able to effectively use occupational information. So, assuming that some aspect of your job involves assisting persons with disabilities to prepare for and/or locate appropriate employment, this manual will help you. Here is a list of tasks that may be in your job description and specific examples of skills required to carry out these tasks:

A. Obtain and present information about work performed and worker requirements for any occupation.

  * Given a job title or description, provide such information on any of 12,741 occupations in under 5 minutes.

B. Assist in assessment of vocational strengths and needs.

  * Formulate vocationally relevant questions for clients and service providers; select appropriate measures.

C. Identify deficits in case record contents and obtain appropriate assessment services.

  * Distinguish between available, conflicting, and vocationally irrelevant information.

D. Assist in career decision-making with persons unable to describe themselves in work-related terms.

  * Demonstrate how to summarize work, educational, and personal histories in work-related terms.

E. Assist in career decision-making with persons unable to state any job goals.

  * Use work history to suggest groups of occupations for exploration.

F. Assist in career decision-making with persons unable to decide between two occupational possibilities.

  * Present the characteristics of both occupations in relation to agreed upon personal strengths and needs.

G. Develop an individual service plan.

  * Identify the discrepancies between a) the current, work-related characteristics of the person and b) the likely requirements of a job goal. Such discrepancies will likely form the basis for service interventions.

H. Develop and follow up on job leads.

  * Identify the industries in which an occupation is found.
  * Prepare for visits to industries by gathering information about an employer's business and descriptions of occupations most likely to be present.

I. Facilitate communication with employers and other professionals.

  * Use nationally accepted terminology in describing job tasks and requirements.

Did you find some of the above tasks in your job description? If so, completing this manual will indeed help you.

Completion of the entire manual requires a commitment of time and energy. Thousands of people made that commitment with the previous edition and have reported benefits to them in four major areas:

A. Obtaining accurate occupational information quickly.

B. Applying occupational information to work-related problems in professional practice.

C. Combining personal occupational experiences with the more structured information available in the DOT to provide to clients a more balanced perspective on work.

D. Defining a practical method of vocational assessment.

How is this Manual Organized?

The manual has four main sections: Section One contains the Preface and the Introduction; Section Two contains eight units on the DOT itself; Unit I explains how occupational information is related to and important in vocational rehabilitation, career counseling, and special education. It also introduces a theory of work adjustment (i.e., what is job success?) and discusses the process of comparing people and jobs.

Units II through VIII provide a complete discussion of the contents of the DOT with exercises that apply occupational information to case practice.

Section Three contains twelve more units that discuss the eight worker traits. Units IX and X introduce the concept of job matching and discusses uses and dangers of it. Units XI through XVIII discuss the eight worker trait areas and their application to career decision-making.

Section Four contains the appendices with definitions (Appendix A), answers to the exercises (Appendix B), and other supportive information (Appendices C through G).

Each unit begins with some introductory comments and asks that you do some reading before attempting the exercises. Whenever you are asked to do supplemental readings/activities, the instructions will appear in a box, like this:

`do this`

Exercises are a particular type of activity so they begin with the unit and exercise number, like this:

`Unit I, Exercise I`

`do this`

What Materials will I Need?

Although the DOT contains a wealth of information, it does not include all of the information gathered by the Department of Labor or required for effective job matching practice. Thus, the manual requires that you have following publications:

1. U.S. Department of Labor, Employment and Training Administration, Dictionary of Occupational Titles, Fourth Edition, Revised, 1991.

2. U.S. Department of Labor, Employment and Training Administration, The Revised Handbook for Analyzing Jobs, 1991.

Both publications are available from a variety of sources including all U.S. Government Printing Offices and various private publishing companies. We do not recommend trying to complete the manual by sharing the publications. To avoid frustration and needless delay, have your own copies available.

Some of the data collected for the DOT have not been released in paper format by the government although they are available from private sources. Both public and private sources make the data available in electronic format. Since access to these data is integral to completion of the manual, samples have been included in Appendix G. Regular users of the DOT will want to have a complete set of data available. Contact the author or publisher of this manual for information about sources. See Unit IX for more information.

Finally, you need a complete, unused copy of this manual and several sharp pencils. We suggest the old fashioned kind with erasers!

INTRODUCTION

Who needs occupational information? We all do, but specifically:

THE CONSUMER, PARTICIPANT, STUDENT, CLIENT:

- To be a meaningful participant in the career decision-making process.
- To learn the career decision-making process because they will need to make more career decisions throughout their lives.
- To examine personal characteristics and preferences in a vocational context.
- To learn (or confirm knowledge) about job demands and rewards.

THE VOCATIONAL REHABILITATION COUNSELOR:

- To complete the legally required assessment for eligibility and rehabilitation need.
- To model the career decision-making process while maximizing consumer involvement.
- To request, approve, and monitor appropriate vendor services during assessment and under the IWRP*.
- To determine job readiness and coordinate all placement activity.

THE VOCATIONAL EVALUATOR OR ASSESSMENT SPECIALIST:

- To develop useful vocational assessment plans which include appropriate assessment activities.
- To maximize participant learning and participation during the assessment process.
- To assist in report writing.
- To assist in purchase and development decisions about assessment instruments.

THE CASEWORK SUPERVISOR:

- To review and monitor the quality of vocational services identified and provided as compared to those required to achieve the occupational goal.
- To identify staff development needs.

THE EDUCATOR:

- To clarify the vocational relevance of educational services.
- To express educational achievement in work-related terms.
- To assist in the development of competency based curricula.
- To request, approve, and monitor appropriate services under a School to Work Transition Plan.

*NOTE: Throughout this manual, words or acronyms followed by an asterisk (*) are defined in Appendix A.

Section Two

Using the Dictionary of Occupational Titles (DOT)

UNIT I

OCCUPATIONAL INFORMATION IN VOCATIONAL REHABILITATION

Unit Objectives:

1. To summarize the uses of occupational information in relation to the goals of vocational rehabilitation.
2. To introduce and explain the person/job match.
3. To present the content of the "Occupational Yardstick."

Introduction

As used in this manual, occupational information is defined as:

1. Data describing the characteristics of occupations and
2. Data describing a person's vocationally significant characteristics.

This fairly broad definition includes both personal traits and occupational factors; it also draws attention to the need for a comparison of both types of occupational information at four major points in the career decision-making, rehabilitation, and special education processes:

* First, a general comparison of data about personal traits and occupational requirements is used during initial assessment. In Vocational Rehabilitation programs, for example, "eligibility" is based on a determination that achievement of goals requires the provision of services to meet the requirements of the occupation.

* Second, Individualized Service Plans (ISP)* are based on agreement by all parties a) that the consumer can either develop the abilities and skills needed for success in an occupational group or a specific occupation or b) that other interventions may be used to compensate for residual discrepancies. This agreement requires a comparison of the characteristics of the occupation and those of the person. Further, the ISP must indicate specific steps by which the match between personal vocational characteristics and the job itself will be maximized.

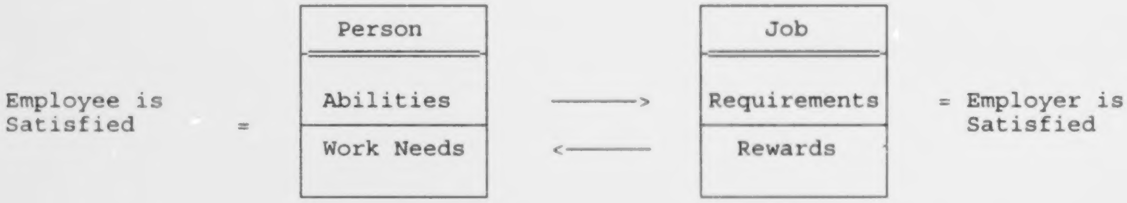
* Third, placement of a worker in employment requires that the demands and rewards of the job be compared with the present abilities and needs of the person. If a "job/person" match is not considered satisfactory, the placement is either rejected or efforts are directed toward improving the match by change or compensation. Any combination of three approaches may be selected: 1) the person must be assisted with behavior, ability, or attitude change; 2) job requirements must be modified; 3) compensatory strategies such as job modification, rehabilitation technology or reasonable accommodation are employed.

* Fourth, termination of case services and follow-up comes after a final comparison of personal characteristics as displayed on the job with those demands of the specific job tasks to assure that a satisfactory adjustment has been made.

Thus, a comparison of worker characteristics with those of the work itself is at the heart of the career decision-making and career preparation processes. This type of person/job matching requires that professional staff have specific skills in gathering and synthesizing information about both people and occupations. Comparison of these two types of occupational information necessitates the availability of a standard against which each information base can be measured.

What is Job Success?

In the state-federal vocational rehabilitation program, client success is usually measured by achieving paid employment lasting at least 60 days. The paid employment involves either a match between job and personal characteristics or some action that compensates for residual discrepancies so that both parties are satisfied. This concept is perhaps put forth best in the Minnesota Theory of Work Adjustment that can be diagrammed as follows:



NOTES: 1. For more on this theory, see Appendix D: Minnesota Theory of Work Adjustment.

2. Words such as "position," "job," and "occupation" are used interchangeably in ordinary conversation even though they have different technical meanings that are important. Please read the definitions for element*, task*, position*, job,* and occupation* in Appendix A: Definitions, to clarify their precise meanings.

In the Minnesota Theory, job success or adjustment is defined as a point where both the worker and the employer are satisfied. In the public vocational rehabilitation program, the rehabilitation case manager uses information from both the worker and the employer as well as direct observation to make a decision that the "match" is satisfactory and that the case may be successfully closed.

Actually, a satisfactory work adjustment means a "good" person/job match in at least three areas:

1. The occupational characteristics of the person (ability to perform the actual work) must be sufficient for the tasks assigned,
2. The person's work behavior must be acceptable to the employer, and
3. The rewards of the job must satisfy the needs of the worker.

Vocational rehabilitation services should be directly related to the improvement of the person/job match. Therefore, those who receive such services, provide them, or approve them should be able to see how their relationship to vocational outcome, i.e., the improvement of the match. Occupational information is thus used to identify the need for change in a specific area and the probable effect of services on vocational outcome.

For example, we might use occupational information to determine that the position being considered for a person (Henry) requires four hours of standing and walking a day and also to determine that presently "Henry" can stand only one hour a day. If the parties agree that physical therapy can be expected to increase his standing tolerance, it is clearly a desirable (justifiable) service. If, however, it is agreed that services are not likely to substantially increase tolerance and other ways to address the discrepancy (i.e., rehabilitation technology, specialized placement, supported employment) are not identified, a job placement problem is likely.

The important point is that occupational information is used to compare vocationally significant characteristics of the person and of the job and identify discrepancies likely to interfere with success. Vocational rehabilitation staff counselors then provide leadership in identification and presentation of ways in which the match might be improved. Methods of reducing discrepancies include: a) providing services that change the person's characteristics, b) modification of the demands of the job, and c) approaches that compensate for the discrepancies themselves.

To be reasonably accurate, comparison of people and jobs must include information in each of three areas:

1. Occupational characteristics
2. Work behavior
3. Job satisfaction needs/occupational reinforcers

This manual focuses on the application of occupational information in the first area: to compare the occupational characteristics (abilities, etc.) of persons to those of positions, jobs, and occupations.

NOTE: For those interested in additional information about the two other areas in which job/person matching is important, see Appendix C: Critical Vocational Behaviors, and Appendix D: Minnesota Theory of Work Adjustment.

Before we move on, let's stop and try some exercises to help you remember the things learned thus far.

UNIT I, EXERCISE I

1. The most accurate term for the total work assignment of a single worker is ______________________________.

2. The job/person match is said to be successful when the ______________ of the worker fulfill the ______________ of the job and the ______________ of the job satisfy the ______________ of the worker.

3. In the State-Federal Program of Vocational Rehabilitation, the decision that a job/person match is "satisfactory" is made by ______________.

4. Rehabilitation services provided to eligible V.R. clients must be justified on the basis that they will ______________ the job/person match.

5. Before a job/person match can be considered, four bodies of information must be made available:
______________ and ______________ of the person,
and ______________ and ______________ of the job.

6. Are the following examples of elements, tasks, positions, jobs, or occupations -

   a. Machine operator______________
   b. Cashier at McDonalds______________
   c. Cashier______________
   d. George Johnson's duties as cashier at McDonalds______________
   e. Vocational Rehabilitation Counselor______________
   f. Totaling customer's bills at McDonalds______________
   g. Dropping uncooked potatoes into a basket for frying______________

Check your answers in Appendix B, page 111.

The Occupational Yardstick

When we want to compare two or more things, we use a measuring device as a standard of comparison:

- To compare the weights of two people, we use a scale.
- To compare the lengths of two cars, we use a yardstick.

If we are to compare a person's characteristics with those of an occupation, we also need a standard of comparison that will apply equally well to both - we need an "occupational yardstick."

The DOT provides two useful standards which we can combine to construct our yardstick:

- A work profile - a description of the work involved in an actual position or the type of duties a person wants.
- A qualifications profile - the significant traits required for a position or the traits of a worker.

On page 14, we have provided an example of this yardstick as it can be applied to a person (Henry) and a position in which he is interested (host at Drakes' Restaurant). Henry's counselor developed a work and qualifications profile of Henry, and it appears in Column 1. Notice that you can get a fairly complete vocational picture of what Henry wants to do and can do by reading down Column 1.

Henry's counselor used the DOT and an interview with the restaurant owner to develop the work and qualifications profile for the job opening at Drakes. By reading down Column 3, you get a clear picture of what the job is and its demands.

The counselor used the Occupational Yardstick (Column 2) to organize the available information about Henry and the opening. By reading across the page, you can compare the job characteristics with Henry's work traits. Look at page 14 again and study the person and the position. Note that there are several parts of the job which seem well suited to Henry. In other areas, however, he is likely to have difficulty meeting the demands of the job or find that the job doesn't fit his needs.

UNIT I, EXERCISE II

Review page 14 as if you were responsible for helping Henry make a decision this opening.

Draw circles around areas in Column 1 where you think Henry may have difficulty meeting the demands of the job.

Then, draw circles around areas in Column 3 where the job may not be able to satisfy Henry's needs.

Check Appendix B, page 112, "Henry's Occupational Yardstick," to see which areas are in question. You may not agree completely with our conclusions, but we think you will agree that this yardstick would give everyone involved a starting point for discussing areas of differing opinion. It would also give clues as to the types of diagnostic information and rehabilitation services that might be needed. This comparison of the person and the job is a major focus in the VR process.

THE OCCUPATIONAL YARDSTICK

Column 1 Henry's Characteristics and Needs	Column 2:	Column 3: Demands & Rewards, Host at Drakes Restaurant
Supervise, Coordinate, Train, Prepare	WORKER ACTIONS (does what)	Supervises, Coordinates
Dining Room & Kitchen Staff	IMMEDIATE OBJECT (to whom/what)	Dining Room Staff
To Provide	INFINITIVE (in order to)	To Provide
A luxurious eating experience for people	GOAL (accomplish what)	Fast & Courteous service to patrons
Social Service, Artistic, Leading-Influencing	INTERESTS (preferences for)	Business Detail, Selling, Accommodating
Variety, Directing others, Precise decision-making	WORK SITUATIONS (Ability to adapt to)	Frequent duty change, Planning & Directing an entire activity, Decision-making on judgment
Interpret data, Read reports & journals	GENERAL EDUCATIONAL DEVELOPMENT (Reasoning, math, and language)	Interpret data with limited standardization, Prepare business letters, Compute payroll, Records receipts & credits
Doesn't want more schooling. Will spend up to one year as trainee	SPECIFIC VOCATIONAL PREPARATION (Type & duration)	On-the-job training, 6-12 months to learn job and clientele
One hr. standing/walking Maximum lifting: 20 lbs., Seeing, talking, hearing	PHYSICAL DEMANDS (Capacities)	Four+ hrs. standing/walking, Twenty lbs. lifting regularly, Seeing, talking, hearing
Inside	ENVIRONMENTAL CONDITIONS (Physical surroundings)	Inside
Above average in intelligence, verbal; low average in clerical; below average numerical	APTITUDES (Ability to learn to)	Average verbal, numerical, & clerical
High people, average data, low things	DATA, PEOPLE, THINGS (Relationship to)	High data, average people, low things

Occupational Information and You

To complete this section, you will need accurate, direct occupational information. Let's start by defining that term:

> Direct Occupational Information is data about work requirements that is obtained by formal job analysis* or is based thereon.

All other information about occupations is called indirect including brochures, articles, interviews, and personal experience. Although indirect information isn't usually obtained in a scientific way, we need both direct and indirect occupational information to do our jobs. Indeed we shouldn't depend on either one alone!

Here are some more questions on the material covered thus far:

UNIT I, EXERCISE III

1. To compare people with positions, jobs, and occupations, we use the ____________________ ____________________ which has two parts, a ____________ of the world of work itself and a ______________________ profile.
2. Occupational information which is derived from formal job analysis is called ______________________________________.
3. For each of the following examples of occupational information indicate whether it is most likely direct or indirect.
   a. A brochure describing the ABC School's course in auto mechanics ______________________________.
   b. A report on the requirements for auto parts clerks, as prepared by the U.S. Department of Labor. ______________________________
   c. Your knowledge of the duties of musicians based on five years of experience with the house band at Bobo's Roadhouse. __________________
   d. An analysis of secretarial positions in a large manufacturing plant as prepared by their position analyst. ______________________________
   e. Your observation of clerical workers based on a plant tour ____.

Check your answers on page 111.

How do we Select an Occupational Information System?

If we are going to take the time to learn a system to help us with the job/person match, it should have the following characteristics:

It should:

1. Be based on the most direct, objectively obtained information,
2. Include all major occupations (regardless of popularity),
3. Be usable by staff and clients alike,
4. Have characteristics applicable to both jobs and people,
5. Cross-reference to other systems for easy access,
6. Classify all occupations without overlap,
7. Have widespread acceptance,

8. Help us access occupational information from other sources, and, finally,
9. Provide a common language for discussion in career decision-making and job placement.

Only one occupational information system meets all these requirements: The Fourth Edition, Revised 1991, of the Dictionary of Occupational Titles (DOT).

UNIT II

INTRODUCTION TO THE DICTIONARY OF OCCUPATIONAL TITLES

Unit Objectives:

1. To review the history and development of the DOT through the first four editions.
2. To describe the two major functions of the DOT, Fourth Edition, Revised 1991, as applied to Vocational Rehabilitation.
3. To review the relationship between job analysis and the DOT.

History and Development of the DOT

The first public program of occupational research began in 1933. Its purpose was to provide public employment offices with information useful in the placement of large numbers of unemployed workers. This early research was originally published in separate volumes according to industries in which the occupations were found. It soon became apparent, however, that this approach was resulting in too many volumes to be functional in day-to-day usage.

In 1939 the first single volume of the Dictionary of Occupational Titles appeared. It summarized the information from earlier works, added data on occupations not previously studied, and used a system of numbers as an "occupational code." The system was not easily used without considerable practice and reflected the fact that the DOT was primarily for use by public employment office staff. The second edition of the DOT appeared in 1949. It included much of the information on occupations derived from World War II manpower research. For example, occupations in the new plastics industry were included for the first time. Continued expansion of occupations and increased complexity thereof during the postwar era forced publication of several updates and supplements. In 1955, for example, one supplement appeared that contained 2,200 new and revised definitions.

In 1965, a considerably expanded and revised third edition appeared. Besides offering definitions for over 20,000 titles, this DOT introduced a system of "worker functions" that facilitated use of the DOT for person/job matching. The occupational code was revised and made more readily understandable. A new system of classifying occupations, called worker trait arrangement, made it possible to determine the degree to which aptitudes, interests, education, physical capacities, etc., were required for average successful job performance. It should be noted that like its predecessors, the third edition had to be supplemented; it was three years after original publication before the third edition was complete.

With each new edition, the DOT became more useful outside the public employment program. This was especially true of the third edition which became widely used in a variety of settings. Of particular interest were two uses which relate to the disabled: First, DOT materials were adapted for use by vocational rehabilitation personnel in all the task areas mentioned in the Preface. (The extensive experience derived from these uses was the basis for the first edition of this self-study manual which appeared in 1979.)

Second, the third edition was also extensively modified as the basis for a course in occupational exploration and career decision-making for high school students. Although this program did not get wide usage in its third edition version, it was extensively field tested including use with persons with disabilities. The Fourth Edition, first released in 1977, contained more new definitions and thousands of modifications to those previously included. In an effort to keep current, supplements were published in 1982 and 1986. Technological advances have continued to result in rapid change in occupational content and job characteristics. The Fourth Edition, revised in 1991, is the most recent attempt to keep pace in a rapidly changing job market. Experienced users will note the impossibility of this task.

Structure of the Fourth Edition, Revised 1991, of the DOT

The DOT is a two volume publication that contains a great quantity of occupational information. Besides additions, changes, and deletions of occupational descriptions, several changes were made to reflect new methods in a companion publication, The Revised Handbook for Analyzing Jobs (HAJ*).

For now you need remember only that the DOT has two major functions:

1. The identification of occupational titles and their definitions.

2. The classification of occupations in four major ways so that job requirements and worker characteristics can be compared:
    a-Occupational Group Arrangement (OGA)*
    b-Industry Designation (Ind. Des.)*
    c-Data, People, Things (DPT)*
    d-Worker Trait Groups (WTG)*

Job Analysis: The Foundation for the DOT

The data used for developing the occupational definitions and classification systems were derived from 75,000 job analyses.* Job analysis is a separate subject in itself. The Revised Handbook for Analyzing Jobs contains most of the information needed to do job analysis. For now, we need know only that it is an organized system of gathering occupational information that involves direct observation of the work performed on a specific job plus interviews with the worker(s) and often supervisor(s). A job analysis contains two broad types of information: the work performed and the worker requirements. Under these broad headings five specific types of information are recorded:

1. What the worker does in relation to data, people, and things (called Worker Functions)
2. The methodologies and techniques employed (called Work Fields)
3. The machines, tools, equipment, and work aids used (abbreviated as MTEWA)
4. The materials, products, subject matter, or services which result (abbreviated as MPSMS)
5. The characteristics required of the worker for average, successful performance (called Worker Traits).

From this information task statements are written and from those, a job summary is written that serves as a mini-job description. A sample job analysis form is available on page 14-7 of the Handbook. Please review it briefly.

There are two final notes about job analysis that are significant:

1. Job analysis is conducted by observation and interview, but the report is on the work. Every effort is made to record the characteristics of the position, not of the particular worker.
2. Since all the definitions in the DOT are based on several job analyses from around the country, they are really occupational descriptions. This means that their usefulness is in providing direct occupational information of a general nature. A specific position cannot be expected to be exactly the same as reported in the DOT.

THE MAJOR IMPLICATION OF THESE POINTS IS THAT PROFESSIONAL JUDGMENT AND ACTIVITY BY REHABILITATION PERSONNEL WILL BE NEEDED TO APPLY DOT DATA TO SPECIFIC CLIENTS AND POSITIONS IN ORDER TO ASSURE A SUCCESSFUL MATCH.

The following exercises will help you remember some of the more important information from Unit II.

UNIT II, EXERCISE I

1. The DOT has evolved over the four editions from a complex document intended primarily for use by ________________ to a broad source of occupational information of use to both ________________ and ________________.

2. Information in the DOT is based on direct occupational information derived from ________________.

3. Job analysis consists of direct observation of the work performed and ________________ with workers & supervisors.

4. Job analysis describes what the worker does in relation to data, ____________ and ____________, called ________________; the methodologies and techniques employed called ________________; the machines, tools, equipment work aids, abbreviated as ____________; the materials, products subject matter, or service which result abbreviated as ____________; the specific characteristics required of workers called ________________.

5. The two major functions of the DOT are (1) ________________ and identification of occupational titles and (2) ________________ of occupations into four main systems.

6. In the DOT and accompanying materials, occupations are classified according to ____________ ____________ arrangement; ____________ designation; ____________, ____________, ____________, and ____________ ____________ groups.

7. Although the data in the DOT is based on 75,000 direct ____________ analyses, it has been combined and summarized to the extent that it now reflects ____________ descriptions.

8. Job analysis seeks to record the ____________ involved in a position and not the characteristics of a ____________.

Be sure to check your responses on page 111.

UNIT III

THE OCCUPATIONAL DEFINITION AND ITS USES

Unit Objectives:

1. To introduce and explain the parts of the Occupational Definition
2. To explain how to develop a Work Profile from the occupational definition
3. To provide practice in deriving a Work Profile from a description of a job or a work history.

Parts of the Occupational Definition

Each of the more than twelve thousand occupational definitions contained in the DOT has seven parts. They are arranged in a standard order so that once you learn where to look, you will be able to find specific information quickly.

```
Read pages xvii - xxiii in Volume 1 of the DOT for information about each
part of the occupational description.
```

Here are the essential points from that reading:

A. The Occupational Code Number

Each occupation defined in the DOT has a nine-digit number that is unique. Definitions are organized according to this number beginning on page 13, 001.061-010, which is Architect, and ending on page 991 with 979.687-034, General Worker, Lithographic.

Here is other information you will want to know about that occupational code:

1. The first three digits identify the "job family" or Occupational Group Arrangement. (We will study OGA in detail in Unit V.)

2. The second three digits identify the worker function level of the occupation and is usually called DPT. (More about this in Unit V.)

3. Because some occupations are found in the same job family and have the same worker function levels, <u>a third set of digits</u> has been added so that each occupation will have <u>its own unique</u> <u>occupational code number</u>. The use of computers to store and make occupational information available will make this increasingly useful.

   (Note on page 725 of the DOT that there are two occupations with the same first six digits of the code 722.381-. Without the last three digits we couldn't use the occupational code to indicate which one we wanted. By adding the last three digits, however, we can differentiate between ASSEMBLER (tel.& tel.) and INSTRUMENT INSPECTOR (aircraft mfg. air trans).

B. The Base Title of the Occupation

Occupations are known by many titles and we need to know which is the correct or proper one. We will study the different types of titles in Unit IV. For now, just remember that the occupational base title is:

1. The title by which the occupation is known in most places,
2. Always shown in upper case, boldfaced type, e.g., COIL CONNECTOR,
3. Always the second item in the Occupational Definition, immediately following the occupational code.

C. The Industry Designation

Although we will learn much more about Industry Designations in Unit VII, for now you need to know that they:

1. Are listed immediately after the base title to help differentiate between two identical titles, e.g., ASSEMBLER (jewelry) and ASSEMBLER (elec. equip.),
2. Are shown as abbreviations and in parentheses.

D. Alternate Titles

These are simply other names for the base title and are listed because they are commonly used instead of the base title in some parts of the country. They are in lower case letters. For example, "connector" is another title for COIL CONNECTOR.

E. The Body of the Definition

1. This part of the definition may have from two to seven parts. Always included are:

   a. The Lead Statement. This is the first sentence in an occupational definition and ends with a colon (:). It summarizes the entire description by including:
      -the worker's actions,
      -the object of that action,
      -the machines, tools, equipment, and work aids used by the worker,
      -the purpose of the occupation, e.g., materials processed, products made, subject matter dealt with, or services rendered.

   The Lead Statement always describes the worker's action and the object of the action. The purpose, materials, tools, equipment, and work aids may have to be assumed. For example, a SPIDER ASSEMBLER (721.684-026).
      -assembles (worker action),
      -coils, poles, and fastening devices (object),
      -to build rotating field for motors and alternators (the purpose of the occupation, in this case is a product),
      -the materials, tools, etc., used are found elsewhere in this definition.

b. Task Element Statements. These are the major tasks that make up the occupation. These statements have many of the same components as the Lead Statements. They always:

   -begin with a verb that describes the worker's action
   -give the object of the verb.

2. Parts that appear in some definitions, but not all, are:

   a. "May" Item. These statements are task statements that appear in some jobs and positions within the occupation, but not others. The word "may" means that in some instances the task will be a regular part of a worker's responsibility. When we adapt a general occupational description to specific employment for a client, it will be important to find out if "may" statements apply to that position. For example, some SPIDER ASSEMBLERS "may" prepare the leads and clamps.

   b. Italicized Words. Sometimes a word is used which has a specific vocational meaning which is not ordinarily found in a standard dictionary. When this happens, the word will be printed in *italics*. You can look up the meaning for an italicized word in a glossary found on pages 993-1001 of the DOT.

`Just to try it out, look up the words` *`drip`* `and` *`head`*`.`

   c. Bracketed Titles. In some instances a worker in one occupation will be required to perform duties that are usually part of those found in another occupation. When this happens regularly, the task will be mentioned, along with the base title where it is usually found, in brackets. When an occupational title appears in brackets in the definition of another occupational description, you are considering for a client, you should look at both definitions to be sure you have all the necessary information. For example, a COIL CONNECTOR is regularly expected to lace and tie coil leads, which is usually the type of work done by a LACER AND TIER.

   d. Unbracketed Titles. These are also base titles which appear in the definition of another occupation. This time, the reason is to show a close, working relationship, such as when one worker supervises the other. When an unbracketed title appears in a definition, you will be able to decide the nature of that close relationship. For example, an ELECTRICAL APPLIANCE REPAIRER may assist an ELECTRICAL APPLIANCE SERVICER in repairing certain items. And, a VOCATIONAL REHABILITATION COUNSELOR may refer clients to a BUSINESS-ENTERPRISE OFFICER for specialized placement in a business enterprise.

   e. Roman Numerals. Sometimes different occupations are known by the same base title. When this happens to occupations in the same industry, Roman Numerals are assigned after the Industry Designation. This lets you know that more than one title should be consulted to be sure you have the one you want.

As an example turn to page 760 in the DOT. Note that there are two occupations listed for ASSEMBLER (ordinance), 736.381-010 and 736.684-014. If you read the two definitions, you will note that there are some significant differences between the Lead and Task Statements for the two occupations. Therefore, the Roman Numerals have been added as a warning that there is more than one occupation in the firearms industry entitled ASSEMBLER.

f. Statement of Significant Variables. At the end of a definition, a sentence will occasionally begin with the words "Important variations may be...." These usually include descriptors which eliminate the need for nearly identical titles and descriptions. An example is 207.682-018 OFFSET-DUPLICATING-MACHINE OPERATOR (clerical): "Important variations may be indicated by trade names of machines used."

F. Undefined, Related Titles

This type of title is for a variation or specialization of a base title. It is listed near the end of the definition using the opening statement "May be designated...." or some similar phrase. The reason why it is identified as a separate but related title is given along with the Undefined Related Title in capital letters.

For example, an INSPECTOR, FINAL (firearms) may be designated as a FINAL INSPECTOR (firearms) if his/her functions are restricted to that stage of the process. As another example, look on Page 761 at the description for 737.131-010. Fireworks assembly supervisors may be designated by other undefined, related titles according to the type of product manufactured or the function supervised.

G. Definition Trailer

The last line of each definition contains a number of codes that will be studied in Section Three. The only code you should be aware of now is the last one labeled DLU, for Date of Last Update. The year shown is when the definition was last studied by the Department of Labor. However, this does not mean the year in which it was last analyzed. In this instance, "studied" means "looked at."

Using the Occupational Definition

Earlier we learned that one use of the DOT was to develop the occupational yardstick and that the yardstick has two parts -- a Work Profile and a Qualifications Profile. Now that we understand the occupational definition, we can develop the Work Profiles which are made up of four parts:

1. Worker Action - an action verb that tells what the worker does.
2. Immediate Object - the object of the verb or the "to what or whom."
3. Infinitive - the second action verb telling how the goal is accomplished.
4. Goal - the material, product, subject matter, or service that results.

As an example let's look at the lead statement for VOCATIONAL REHABILITATION COUNSELOR as it is diagrammed into the work profile.

VR Counselor	Work Profile Component
Counsels...	Worker Action (Does what...)
...handicapped individuals...	Immediate Object (to whom...)
...to provide...	Infinitive (in order...)
...vocational rehabilitation services.	Goal

All Lead Statements and Task Element Statements provide data which can be diagrammed into worker action and immediate object breakdowns. Information for the infinitive and goal portions of the diagram is not always stated but can usually be implied. For example a COATER (bus.ser.) 503.685-010 "Tends equipment that cleans, coats and dries baking pans." The worker action is "tends" and the immediate object is "equipment." Although no infinitive or goal is explicitly stated, the equipment is tended in order "to clean, coat and dry" "baking pans."

Another example of a task statement in which inferences are required is found in the Lead Statement for AUTOMOBILE RACER (amuse. & rec.) 153.243-010: "Drives automobile racing car in competitive road races." The portions of the diagram which have been inferred are shown in parentheses ().

Drives	Worker Action
Automobile Racing Car	Immediate Object
(to win)	Infinitive
Competitive Road Races	Goal

Let's try some for practice. There are seven occupational codes on the following page. Look each one up, record the title, and read the complete definition. Then diagram the Lead Statements. Try to make a complete diagram, using parentheses to indicate any inferences you have to provide.

UNIT III, EXERCISE I

Occ. Code Base Title/Worker Action/Immediate Object/Infinitive/Goal

1. 806.684-106 ____

____

2. 570.685-038 ____

____

3. 376.667-010 ____

____

4. 789.687-054 ____

____

5. 041.061-054 ____

____

6. 041.061-078 ____

____

7. 102.117-010 ____

____

Check your answers on page 113.

Before we leave the subject of Work Profiles, we should note that this technology is a good way to obtain a work history from a client and for gathering information about client aspirations. Here are two client statements. Could you translate them into Work Profiles?

> "I ran a mixing machine that made dough at the Crumbles Bread Co. I got a list of which things I was to make each day. I put the flour and stuff on the dolly and moved it to the dough machine and dumped it in. Then I used a list to tell how much other stuff to put in, turned on the machine and made sure everything went along OK."

> "What I would like to do though is work over at the silversmiths running one of those profile saws where you trim up the edges of silver plates and dishes after they have come off the form press. I would have to measure the plates and dishes to know where to cut and then set up the saw and all. But I know how to use all the tools and I wouldn't have to lift anything heavy."

From the information given, the Work Profile from her former job would probably look like this:

WORKER ACTION	IMMEDIATE OBJECT	INFINITIVE	GOAL
Loads	Ingredients	To mix	dough in proper proportions
Operates	Dough Machine		

You might want to ask some additional questions to detect important information about Physical Demands, other duties, etc., but the client told us enough to get a good profile for further use.

As for her job goal, the profile might look like this:

WORKER ACTION	IMMEDIATE OBJECT	INFINITIVE	GOAL
set up and operates	profile saw	to trim	plate and dish edges

Again, there are some questions you would want to ask (such as the type and complexity of tools used and how standards are set) but you should have a good idea of what to ask. Notice, also, that you have the beginnings of a comparison between what the client did in the past and wants to do in the future. These are examples of how you can apply the techniques in this manual to your professional practice. Constructing work profiles takes a little practice but you now have the basic knowledge required.

UNIT IV

THE SEVEN TYPES OF OCCUPATIONAL TITLES

Unit Objectives:
1. To provide a review and explanation of the seven types of Occupational Titles.
2. To discuss the Alphabetical Index used to locate Occupational Titles.
3. To provide practice in identifying the various types of titles.

The Seven Types of Titles

In the previous unit on occupational definitions, we discussed five of the seven types of titles because they actually appear in the definition itself. The other two types of titles are for reference purposes. Let's look at them first and then review all seven.

Master Title -

> Turn to page 1 of the DOT and read the description at the top of the page. Then skim the 15 Master Titles.

There are two things you should know about Master Titles:

1. They are occupations with common titles and a number of common duties. The common duties for all occupations with that title are printed under the Master Title to save space and reduce repetition. Also, however, the ways in which Master Title occupations are classified are listed on these pages.

   For example, DRAFTERS are classified according to the type of drafting they do. Duties common to all drafters are defined.

2. Master Titles are indexed but are followed by the word "(Master)" and have no DOT code of their own. These are your clues to look on pages 1-2 to find both common duties and how to classify the title further.

   For example, if you were helping a client locate a definition for a drafter, you would note that it is a Master Title and read the master definition to be able to describe the general duties of all drafters. Then you would ask the client which type of drafting he/she wished to learn more about and using that information, locate the proper base title(s).

Term Titles -

> Turn to page 3 in the DOT and read the description at the top of the page. Then review the 194 Term Titles.

Here are the most important things you should know about Term Titles:

1. They are occupations with common titles but few common duties, requirements, or job locations. In other words, Term Titles are too general to tell you enough about the occupation to find the base title or definition.

   For example, the term "Engineer" covers such a wide range of duties and occupations that by itself it has little meaning. Thus the description tells you the range of duties and how the engineering occupations are classified.

2. Term titles are indexed and always followed by the word (Term). They have no DOT code. The descriptions always begin with the words "a term..." to show you that this is not a definition. The description will help you understand how term titles are classified.

Now you have been exposed to each of the seven types of titles in the DOT. Before giving you a chance to demonstrate your ability to recognize and use them, a chart which summarizes the important characteristics of each follows:

TITLE	DOT CODE	PRINT TYPE	DEFINITION
1. BASE	Has own	Upper Case	Only title with own, full definition
2. ALTERNATE	None. Takes code of base.	Lower Case	None
3. BRACKETED	Has own	Upper Case	N.A.
4. UNBRACKETED	Has own	Upper Case	N.A.
5. UNDEFINED RELATED	None, takes code of base	Upper Case	Only a sentence to distinguish it from base.
6. MASTER	None	Upper Case	Those duties which are common to all occupations under the Master Title are defined.
7. TERM	None	Upper Case	None

Here is some more information on titles:

	OTHER CHARACTERISTICS	EXAMPLE
1. BASE	Major title by which occupation is known	VOCATIONAL REHABILITATION COUNSELOR

2.	ALTERNATE	A title used in some parts of country. A synonym for base title.	Prosecuting attorney
3.	BRACKETED	Is a base title in its own right. Appears in [ ] brackets in body of the definition of another base title when some of its duties are frequently assigned to another worker.	When a PRODUCTION COORDINATOR expedites material, he/she is carrying out a function assigned to {MATERIAL COORDIATOR}
4.	UNBRACKETED	Is a base title in its own right. Appears in the body of the definition of another base title to demonstrate a close working relationship between the two and the nature thereof.	A MATERIAL EXPEDITER has a close working relationship with a MATERIAL HANDLER which is of a superior/subordinate type.
5.	UNDEFINED RELATED	A slight variation from the base title which warrants (a) slightly different title and as few words to show what the difference entails.	An EGG GRADER (undefined, related) is basically an EGG CANDLER (base) who also grades eggs by size, weight, color, etc.
6.	MASTER	Master Titles are occupations having common titles and common duties. The definition will also help in classifying by base titles.	SALES ENGINEER
7.	TERM	The description has as its Major purpose to explain how term titles are classified.	PHYSICIAN

The Alphabetical Index of Titles

Located on pages 1225 through 1404 of the DOT, this index lists all base, undefined-related, master and term titles alphabetically. It has two major functions:

1. **It allows you to find the DOT code for all titles (except Master and Term). Since the occupational definitions are arranged numerically, the code number is the key to locating the definitions.**

2. The index alerts you to whether or not you have a title which can be defined or whether you need additional information to decide on the proper title.

   a. If you have a base, alternate, or undefined, related title, a definition can be found.
   b. If you have a master or term title, additional information will be needed before you can locate a title. (The words "Master" or "Term" will appear after the title.)

How Multiple Word Titles are Organized

If an occupational title has more than one word in it, you may have to rearrange them to find the title in the index. In general, title words are arranged to give you a mini-job description. CARPENTER, for example, tells you what the worker does. If you are looking for a particular kind of carpenter, such as a rough carpenter or mine carpenter, it will be listed like this:

CARPENTER, ROUGH CARPENTER, MINE	in both titles, the modifier follows the noun

However, sometimes the modifier comes first due to common usage:

MODEL MAKER
FIRE MARSHAL

In general the rule to follow is: if the extra words in a title modify or specialize the key word, look up the key word. If by doing this the title becomes nonsensical, however, don't. If in doubt, try both!

To help you out, the title is sometimes listed both ways in the index. VOCATIONAL-REHABILITATION COUNSELOR is also listed as "counselor, vocational rehabilitation," for example. Also note that when two words are hyphenated such as VOCATIONAL-REHABILITATION, they will never be split in the index. Thus, there is no listing for Rehabilitation Counselor, Vocational.

Now let's have you look up some titles using the alphabetical index:

UNIT IV, EXERCISE I

Find the page in the index on which the following titles are listed

1. BLASTER HELPER ______________________________
2. FLIGHT SURGEON ______________________________
3. LOOPING INSPECTOR ______________________________
4. FLAGGER ______________________________
5. INSECTICIDE MIXER ______________________________
6. TIPPING-MACHINE OPERATOR ______________________________
7. SEMIAUTOMATIC-STITCHER OPERATOR ______________________________
8. FLOOR SUPERVISOR ______________________________
9. MIRROR SILVERER ______________________________
10. GOLD LEAF GILDER ______________________________

Check your answers on page 113.

Finally, we want you to use the alphabetical index and the occupational definitions to identify the various types of titles and extract other useful information. In the next exercise, provide the information requested. Please note that you cannot always provide a DOT number or a base title and that you are sometimes asked to provide answers which can only be placed in the "other" column. The blank lines have been placed to show you where a response is required.

UNIT IV, EXERCISE II

	QUESTION	DOT #	BASE TITLE	TITLE TYPE	OTHER
1.	SWAGER OPERATOR	________		________	
2.	Swage Toolsetter	________	________	________	
3.	How are LOGGERS classified?			________	________
4.	How are ENVIRONMENTALISTS classified?			________	________
5.	With whom do ELEVATOR STARTERS have close working relationships and what is the nature of that working relationship?	________	________	________	________
6.	What is the basic function of a BARREL CHARRER?	________		________	________
7.	What are the major worker functions for any SEWING-MACHINE OPERATOR, REGULAR EQUIPMENT and how are specific occupations classified?			________	________
8.	Sometimes a ROUND-CORNER CUTTER MACHINE OPERATOR also tends a punch press to drill holes in paper. Whose task is this usually?	________	________	________	
9.	Gem Expert	________	________	________	
10.	According to the lead statements, what is the major difference between the duties of GENERAL DUTY NURSE and a PRIVATE DUTY NURSE?	________ ________	________ ________	________ ________	________ ________

Check your answers on page 114.

UNIT V

OCCUPATIONAL GROUP ARRANGEMENT (OGA)

Unit Objectives:

1. To summarize the organization of occupations by OGA.
2. To provide an opportunity to review the major categories, groups, and divisions of the OGA.
3. To demonstrate how the OGA can be used in vocational rehabilitation.

Introduction

Earlier we learned that the DOT has two major functions: definition and classification of occupations. In Unit IV you learned how to find the definition for any of 12,741 base titles; now we are ready to learn the classification methods and their rehabilitation uses.

Frequently clients know that they want a certain type of job, but they can't give a job title. Instead they say something like "I only know I want to do something with translating foreign languages," or "I used to decorate tiles that get used in mosaics, but now I would like to be a supervisor."

Both of these statements relate to groupings of occupations but fail to provide a title that can be looked up in the alphabetical index. Fortunately the DOT has classified occupations in a way which helps us use the DOT to find specific occupation titles and definitions from such general statements. The first of these classification methods is called Occupational Group Arrangement (OGA). The first three digits of the occupational code tell you the location within OGA where an occupation is located.

The first digit tells the Occupational Category - the broadest grouping. There are nine Occupational Categories and they are listed on page xxix of the DOT. Open your DOT to that page. You will notice that:

1. The first four categories have names which reflect traditional, socio-economic activities.
2. The next four categories are based on industrial or trade terminology, and
3. The last category contains occupations which didn't fit elsewhere.

Remember that every occupation is placed in one - and only one - category and that the placement will be reflected in the first digit of the occupational code. Thus, an occupational code that begins with 5 must be a Processing Occupation and a first digit of 7 tells you that the occupation falls into the Benchwork category. Each category has its own definition which is located in the body of the DOT just before the occupations in each category appear. The definition for the 0/1 category, for example, is found on page 13 because that is the page where the first occupation with a first digit of 0 is found.

Understanding the definitions of the occupational categories is critical to its efficient use. You must not try to use your definition of Benchwork or Processing Occupations. Time spent understanding these definitions now will save a great deal of time and frustration later. Incomplete or incorrect understanding of DOT definitions is the major reason why some people have difficulty using the DOT and erroneously conclude "it isn't useful!"

Look up and read the definitions of all nine categories. Remember that they are located at the beginning of each section of definitions. Notice that in addition to defining the categories some important characteristics of workers are included.

UNIT V, EXERCISE I

Here is a list of occupations. Decide the category in which each belongs and write the correct single digit number next to it.

1. Sales Clerk ____________________
2. Janitor ____________________
3. Electronics Assembler ____________________
4. Carpenter ____________________
5. Wheat Farmer ____________________
6. Machinist ____________________
7. Biologist ____________________
8. House Painter ____________________
9. Truck Driver ____________________

Check your answers on page 114.

When the second digit in the occupational code is combined with the first, the Occupational Division is known. There are more specific groupings of occupations which represent breakdowns according to:

-general types of knowledges or skills,
-broad subject matter,
-type of activity or service and the objective,
-materials, tools, equipment, work aids used,
-material or service which results.

Definitions of each of the 83 Occupational Divisions are found in the body of the DOT. As an example, the definition for the Domestic Services Division of the Service Occupations Category is found on page 239, before any of the 30x.xxx-xxx occupations are defined.

UNIT V, EXERCISE II

Pages xxix and xxx have a listing of each Occupational Division. Turn to those pages and use the listings to provide the most likely two digit numbers for each of the following occupations. If you can't decide which of two Divisions an occupation is in, use the definitions to help you decide.

What are the first two digits of the occupational code for these occupations in:

a) Theology ______________
b) Packaging ______________
c) Ore Refining ______________
d) Fabrication of sand, stone, clay & glass products ______________
e) Forestry ______________
f) Extraction of Minerals ______________
g) Printing ______________
h) Art ______________

2. What is the Occupational Division for these digits:

a) 14 ______________________________
b) 21 ______________________________
c) 25 ______________________________
d) 67 ______________________________
e) 95 ______________________________
f) 46 ______________________________
g) 75 ______________________________
h) 81 ______________________________

Check your answers on page 115.

To complete the OGA each occupation is assigned to an Occupational Group based mostly on the technology used and/or the material, product, subject matter, or service that results. Note that the first three digits of the code must be known in order to locate the Occupational Group. Each Occupational Group is listed on pages xxx-xxxvii of the DOT and defined in the body of the DOT. For example the Household & Related (301) Group is defined on page 239 right after the definition for the Domestic Service Division (30) in the Service Occupations Category. All three definitions precede the first occupational definition of HOUSEKEEPER, HOME (301.137-010). Every section is organized in the same manner:

Occupational Category (1st digit) and definition,
Occupational Division (1st and 2nd digits) and definition,
Occupational Group (1st, 2nd, and 3rd digits) and definition,
Occupational Definitions in numerical order.

Let's go back now to those client statements that we discussed on page 33 of this unit. Here are the steps for taking those general expressions of interest and deciding which group of occupations might be investigated.

"I only know I want to do something with translating foreign languages."

First, underline the key occupational words; in this case there are only three.

Next, try and decide on the category. In this instance it may be necessary to eliminate categories that are obviously wrong -- 2 through 8 seem easily ruled out. By reading the definitions for Categories 0/1 and 9, it is clear that 0/1 is the most likely category. Of course if you happen to know something about translation, it is that much easier to decide.

Next, look at the Occupational Divisions 00/01 on page xxix. Occupations in writing (13) seems to be the most likely Division. Then, turn to page xxx and look at the Occupational Groups within the 13 Divisions. The 137 group is Interpreters and Translators. By turning to that group (page 89), we find four occupations listed that have to do with translating. Since our client said "translate" and "foreign," TRANSLATOR (137.267-018) is the most likely occupation. To provide the client with occupational information, however, we may suggest that she/he also read the definitions for INTERPRETER, and INTERPRETER, DEAF since they are closely related occupations which differ primarily in the method by which language is translated.

The process used was logical, deductive, and may have involved some trial and error. But it works and becomes easier if you:

-understand the general OGA structure
-apply your own knowledge of occupations
-practice.

UNIT V, EXERCISE III

Using the above process, find the most likely group of occupations for this client statement.

> "I used to decorate tiles that get used in mosaic designs but now I would like to supervise others."

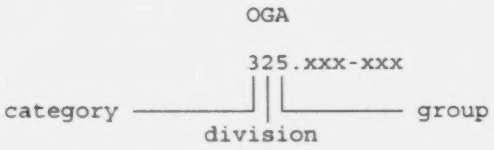
NOTE: In order to do this problem, you need only one additional rule: While general managers are found in the 0/1 category, supervisors and inspectors are found in the category, division, and group where the work they supervise or inspect is found.

Step 1: Underline the key words in the statement.
Step 2: Decide on the most likely category ________________.
Step 3: Decide on the most likely division _______________.
Step 4: Decide on the most likely group _______________.
Step 5: List the occupational code number(s) for the occupation(s) which most closely match the statement: ____ ____.

Check your answers on page 115.

Let's summarize the important things about the OGA approach to organizing occupations.

1. All 12,741 in the DOT are assigned to one - and only one - occupational category, division, and group.
2. This assignment is reflected by the first three digits of the occupational code.



3. Since occupational divisions appear in numerical order, they are also organized by OGA.
4. The categories, divisions, and groups are listed on pages xxix-xxxvii of the DOT.
5. Each category, division, and group is defined in the body of the DOT at the beginning of its section.

UNIT V, EXERCISE IV

Here are some more problems that can be solved by using your knowledge of OGA and the DOT.

1. What material is common to OGA Divisions 56, 66, 76?

   ____

2. What do workers in Occupational Divisions 56, 66, 76 do to that material?
   a) 56__________it
   b) 66__________it
   c) 76__________it

3. What is the OGA code number for a person who:
   a) sells real estate__________
   b) drives a dump truck__________
   c) carves stone__________
   d) repairs electrical appliances__________
   e) manages a fast-foods restaurant__________
   f) tends bar__________

4. Provide the most likely job histories from the following OGA codes:
   a) 201__________
   b) 017__________
   c) 111__________
   d) 253__________
   e) 344__________

5. Here are statements about five occupations. Using your knowledge about OGA, find the correct occupational title and code for each. Then read the definition and develop a work profile for each job using the diagramming skills you learned in Unit III.

STATEMENT:

(a) I ran a machine that slivered almonds.
(b) I set up and ran an extrusion press that made metal tubing.
(c) I was a clerk for City Bus, Inc. and I assigned drivers to various routes.
(d) I worked for the power company cutting trees and limbs that got too near the lines.
(e) I had to run stress analysis tests on various airplane parts to make sure they would stand the G-forces at high speeds.

	OCC.TITLE	OCC.CODE	WORKER FUNCTION	IMMED. OBJECT	INFINITIVE	GOAL
(a)						
(b)						
(c)						
(d)						
(e)						

Check your answers on page 115.

UNIT VI

DATA, PEOPLE, THINGS (DPT)

Unit Objectives:

1. To introduce the concepts of DPT.
2. To provide practice in the use of DPT concepts.
3. To explain the career ladder concept of DPT.
4. To relate DPT with rehabilitation practice.

Introduction

Data, People, Things (DPT) is a method by which the complexity of occupations is identified in terms of the degree to which the worker must be able to function with data, people, and things. By extension, the work capabilities and/or potential of people can be described by the same levels of data, people, and things. Another term for DPT is "worker function."

> Please turn to pages 1005-7 of the DOT and read them carefully. If after studying these pages, you want additional clarification, another interpretation of DPT is found in Chapter 3 of the HAJ.

Summarizing DPT

Here are the summary points about DPT that you should have noted in the readings:

- Every occupation requires workers to relate to DPT, even if that relationship is a simple one.
- Each DPT level is carefully defined.
- Each DPT level is summarized by an action verb descriptor ("handling," "diverting," "analyzing," etc.)
- Each DPT level is also identified numerically, with the lower numbers representing the most difficult levels and vice versa.
- In general, DPT levels are rank-ordered according to difficulty. That is, in each DPT category, the arrangement of items suggests a hierarchy of difficulty. Actually, Data is a hierarchy and Things is two hierarchies (one related to use of machinery: 0, 2, 3, 5, 6 - with the remaining items related to use of body members or hand tools/aids). People items are not organized in a hierarchical. Thus:

  - Workers who are able to function at the "Precision Working" level are generally able to do tasks involving "Manipulating" as well.
  - Workers able to "Analyze" are generally able to "Copy."
  - Workers in a "Tending" occupation can usually also handle "Feeding/Offbearing" tasks.
  - Conversely, it may not be presumed that workers who are able to function at the "supervising" level can also "persuade."

There are several other things you should know about the DPT.

1. In describing the combination of D, P, & T in relation to a particular occupation, the term "worker function level" is used since the three digits tell you "the level at which the worker must function for <u>average successful employment</u>." This does not mean that all positions in the occupation will require the same worker function levels!

2. Examples of work tasks for each DPT level are printed in <u>The Revised Handbook for Analyzing Jobs</u>, Chapter 4. These examples are helpful in distinguishing between levels and in explaining DPT to clients.

3. The DPT level for any occupation is contained in the occupational code:

```
                      XXX. 107-XXX
               ___________┘|└___________
       DATA              PEOPLE             THINGS
(1=Coordinating)    (0=Mentoring)       (7=Handling)
```

4. You can usually learn why an occupation is assigned a particular DPT level by reading the action words in the occupational definition.

   In the example above, for instance, the action verbs in the definition are "counsels, interviews, evaluates, accepts, determines, plans, assists, aids, promotes, develops, refers." Note that these words relate primarily to people and data and at high levels. None of the words relate to things.

5. As the complexity level of people and things increases, so also does the level of data.

   - There are no occupations with high people or things levels but low data levels.
   - The reverse is <u>not</u> true, however. Some occupations are largely data oriented. For example, writers have a DPT level of .067 and accountants .167.

6. As the complexity of DPT increases, other things may occur:

   - Requirements for education and/or experience may increase
   - The pay levels frequently increase
   - The worker tends to have greater freedom in deciding <u>how</u> the work is to be done.

7. Because of the limited hierarchical nature of DPT, you may not assume that a person able to function at a 107 level will also be able to perform occupations requiring a 147 level.

There are obvious exceptions to the above, so don't take them as hard and fast rules. The information is useful in vocational counseling, however. Some frequently heard statements about job goals follow. Using these guidelines and your other DOT skills, list the information that should go into an appropriate counseling response.

UNIT VI, EXERCISE I

1. "I know I don't read very well and I'm terrible at math, but it doesn't matter 'cause I want to quit school and become a construction carpenter like my brother.

2. "So I did drop out of school and haven't had much work experience; I need a job that pays real good if I'm going to have the things I want."

3. "The only job I've ever had was as a carpet-layer helper and I'm sick of always being told what to do. I want a job where I decide what to do without being watched every minute.

4. "For the last five years I worked as a roving sizer at American Woolens, Inc., but they closed down. My cousin says he can get me in at Cannaco Co. as either a structural inspector or can technician. I want the one that will be as similar to my old job as possible in how difficult it would be. Which one should I look at?"

Check your answers on page 116.

DPT and Career Ladders

As rehabilitation workers, we recognize that most of our clients will want - and be able - to move beyond the occupation that is initially selected. "Career Ladder" is a general term which describes a logical sequence of working one's way up from simpler jobs to ones that are more rewarding. By "working one's way up," we usually mean investing time to obtain experience, or further training or education, or a combination thereof.

We also know that in some fields the education and training have to precede employment while in others, it may come after a period of work.

- You become a physician by means of education, not by being an aide, then a nurse, then a family physician, then a surgeon.
- You are more apt to become a truck driver by being a helper than by graduating from a special school.
- Clerks may become bookkeepers on the basis of experience. But bookkeepers usually have to obtain more education to become certified public accountants.

The DOT provides us with a lot of general information about career ladders by the way in which occupational definitions are organized:

- Within an OGA, occupations are listed by DPT.
- Occupations with the most complex DPT levels are listed before those with less complex worker function levels.
- Complexity of data requirements take precedence over people, and people worker function levels are considered before things. For example:

  .365 would be listed before .465
  .061 before .107
  .107 before .117

Look up the 570 OGA as an example. Notice that the DPT levels begin with .130 (SUPERVISOR, CLAY PREPARATION) and decrease through 14 DPT levels to DPT .687 (BATCH MIXER). This is a fairly long career ladder.

- Note that some of the "rungs" have many occupations with the same DPT level.
- Note also that except for the higher DPT levels, this is largely a "things" OGA. Remembering the interrelationships of data, people, and things, however, you also see that as the "things" level becomes less sophisticated, so does the "data" level.
- A worker in this OGA could be quite "upwardly mobile" without leaving the Occupational Group although additional training or education might be required along the way.

The top or bottom rungs of a career ladder are not always found in the same OGA. In the example above, for instance, it might be company policy to use the position CLEANER, INDUSTRIAL 381.687-018 as the "entry level" from which a worker "moves up" to BATCH MIXER. And the occupations above SUPERVISOR, CLAY PRODUCTION, would logically be found in the 189 OGA-MANAGER, INDUSTRIAL ORGANIZATION, to PROJECT DIRECTOR to VICE-PRESIDENT to PRESIDENT.

We have just seen that a complete career ladder may not be contained within even a lengthy OGA. Since some OGAs are very brief (e.g., the 051 OGA contains only one occupation), you will need to combine your DOT skills with your own occupational information to construct career ladders for almost every situation. Here are some general rules to help:

1. If the OGA for a particular occupation contains too few occupations of differing DPT complexities, use the OGA Summary Listings (pages xxix-xxxvii) to find likely, related OGAs.
2. The Occupational Divisions of 16, 18, and 19 are good places to look for administrators and managers.
3. The n.e.c. (not elsewhere classified) Occupational Divisions and Groups are helpful in locating related occupations.
4. The definitions of Occupational Categories, Divisions and Groups may provide clues to where related occupations are found. For example, the definition for OGA Category 4 states that managerial occupations for agriculture are in Group 180; the definition for the 18x Divisions explains the difference between "line" and "staff" occupations.

Before giving you a chance to apply your new knowledge about career ladders and DPT, we need to consider an exception to the rule that by listing occupations by DPT, the DOT also provides logical career ladders. This exception is clearly visible by looking at the way in which occupations in OGA 195, Social and Welfare Work, are arranged.

Please skim the titles and DPT levels on pages 160-163.

- You should have noted that the general trend is from most complex to least complex and the DPT levels range from 107 to 367.
- You probably also noted, however, that the caseworker is listed before the administrator or casework supervisor. Obviously, this in not a typical career ladder pattern.
- When there is a discrepancy between DPT complexity and career ladder, the DOT gives priority to DPT. Case workers are required to have higher levels of people oriented skills than are supervisors for average successful performance of their jobs. Therefore, caseworker has a higher DPT level and is listed first.
- In developing a career ladder, especially in the 0/1 Occupational category and the social services, this exception is likely to occur. It also occurs in some "industrial" occupations: a HEAD GREASE MAKER 549.132-010 is listed before SUPERVISOR, SPECIALTY PLANT 549.137-018 even though the former may "work up" to the latter!

Using DPT and Career Ladders

In this unit we have learned several new ways to use the DOT in Vocational Rehabilitation by combining the concepts of DPT and Career Ladders with our other DOT skills.

- If we know the occupations in which a client has successfully worked, we can use DPT levels to estimate previous worker functioning levels.
- If a client has had a series of different jobs, the pattern will be visible in terms of progression, regression, etc.
- We can use work history to assess client ability to transfer job skills to new occupations.
- If functional ability is reduced by disability, occupations with lower DPT levels can be identified.
- If a client's stated interest is inappropriate in terms of DPT, other options can probably be suggested in the same OGA.

UNIT VI, EXERCISE II

To convince you that these things are possible, here are some mini-case examples. Read them carefully and then use your DOT skills to answer the questions which follow:

1. Joey wants to be "the kind of boilermaker that repairs boilers." You have good evidence that his DPT level is .667 and that he doesn't have any experience in this field. A. What occupation could you suggest which would be consistent with the above information? B. Is there another step on the career ladder which could be suggested after he has some experience? (Assume no increase in his DPT Level.)
   A. Base Title____________________________ Occ. Code________________________
   B. Base Title____________________________ Occ. Code________________________

2. Mary worked successfully for 5 years as a weather strip-machine operator before the company closed. She has two job possibilities at present: drum sander and glass-lathe operator. Which is nearest to her former job in terms of worker function?
   Base Title________________________________ Occ. Code________________________

3. Henry was running a jogging machine in a paper bag plant when he caught his arm in the machine. After being fitted with a prosthesis, his employer offered him the same job, but Henry couldn't fan the stacks or operate all of the controls. Your assessment suggests a maximum DPT level of .367. What occupations in the same OGA meet the client's wishes for a non-machine job that maximizes his worker functioning level and takes into consideration his limitations in dexterity?
   Base Title________________________________ Occ. Code________________________
   Base Title________________________________ Occ. Code________________________

4. Alice wants to be a Tax Auditor and wants you to help her get the necessary training. Your assessment of test results and educational history leaves you wondering if she can learn the procedures necessary. Does her work history generally support her statement that she can be successful or not?
   - 3 years as legal secretary
   - Steno Pool Supervisor for 1 year
   - 4 years as general bookkeeper

   Yes__________________ No_________________

5. Jane wants to be a chef. At present you assess her skills to be at the .687 level. Although she has good potential for higher Data and Things worker function levels, she will continue to have difficulty with People oriented tasks.
   A. What occupation related to cooking could she fill now?
      Base Title_______________________________ Occ. Code________________________
   B. How many other occupations in the same OGA could she progress to without an increase in the People Level?

   ____

Check your answers on page 117.

UNIT VI, EXERCISE III

Use the definition for OGA 091 - Occupations in Secondary School Education and the other skills you have learned in this unit to complete the following career ladder:

______________________________	__________.117-018
Assistant Principal	________________
TEACHER, SECONDARY SCHOOL	________________
______________________________	__________.327-010
______________________________	__________.367-074

Check your answers on page 117.

A brief explanation of each part of the occupational code was provided in Unit III of this manual. Now, in Units V and VI you have studied the OGA and DPT digits in detail. Do you recall what the last three digits signify? If not, quickly re-read Unit III, page 20.

Here is a bit more detail about those last digits:

1. Many occupations share exactly the same OGA/DPT codes. For example, there are seventy-one occupations with the code 692.685. Without the last three digits, we could not use the occupational code to distinguish between ABRASIVE BAND WINDER 692.685-010 and ZIPPER-MACHINE OPERATOR 692.685-270.
2. The first title with a particular OGA/DPT code is assigned -010 as the third set of digits.
3. When more than one occupation has the same OGA/DPT code the occupations are printed alphabetically and assigned digits in multiples of four (010, 014, 018, 122, etc.).
4. In rehabilitation, the principle use of the last three digits will be to assure that the exact occupation has been indicated numerically.

UNIT VII

INDUSTRY DESIGNATION

Unit Objectives:

1. To introduce the Industry Designation as one major method by which occupations are classified.
2. To provide practice in using the Industry Designation.
3. To demonstrate uses of Industry Designations in rehabilitation practice.

Introduction

We have already learned that occupations may be classified according to Occupational Group Arrangement (OGA) and by the degree to which they require the worker to deal with Data, People, and Things (DPT). Classification of occupations can also be based on <u>where</u> the occupation is found. The Industry Designation* (IND. DES.) assigned to an occupation is shown in parentheses immediately following the base title in each occupational definition.

`Turn to page xx in the DOT and read the explanation of Industry Designation.`

Here are the summary points about Industry Designations:

1. Industry Designations are based on the industry in which the duties, products, processes, raw materials, etc., are found.
2. Three hundred and four Industry Designations are listed and defined in the DOT. All occupations are assigned to at least one industry; some are assigned to more than one. Some Industry Designations are actually groupings of occupations, rather than places, e.g., "clerical," "professional and kindred," "machine shop."
3. Some occupations are found in such broad areas that they are simply shown as "any industry," e.g., a polisher could polish a very wide variety of items.

```
Please turn to page 1036 in the DOT and read the definition of "any
industry."
```

4. Page 1023 of the DOT contains a list of each Industry Designation; the <u>full</u> title of each one is printed in capital letters but the abbreviations used in occupational definitions are also shown. The page number where each Industry Designation is defined is also shown.
5. In addition to listing and defining each industry, you are also provided with information about related industries and an alphabetical list of each occupation in the industry and its occupational code.
6. Since all industries use cleaning, managerial, and support staff, the list of occupations in a particular industry is not actually complete.

Let's review one industry as an example. Using the alphabetical index to industries (page 1023-25) find the listing for Office Computing and Accounting Machines Industry.

- Note that it is in capital letters and that it identifies the page number where the industry is defined.
- Note also that the same reference is provided under the abbreviation "office machines."
- Turn now to page 1144. (Right! There is an error in the DOT. The reference should have been to 1145. No one is perfect!)
- The definition tells you the identifying characteristics of the industry and notes that certain kinds of occupations associated with the manufacture of office machines are found in other industries.
- All occupations within the industry are then listed alphabetically. Note that both base and alternate titles are listed along with their occupational codes.
- You will notice that many of the occupations in this industry are in the 706. OGA (Metal Unit Assemblers and Adjusters, nec). If you turn to that OGA, however, you will discover that all 706. occupations are not in the office machines industry.
- In most instances, it will be quicker to look up an industry by using the index and then the definition and listing. Since the industries are listed alphabetically, however, you may choose to skip the index. If you do, remember that they are listed by abbreviated form, not by full title.

UNIT VII, EXERCISE I

Using your knowledge of Industry Designations and your previously acquired DOT skills, answer the following questions.

1. On what page is the "can & preserv." industry defined?
   ____
2. What are the principle Occupational Groups found in the library industry?
   ____
3. What is the range of DPT levels found in the motor trans. industry?
   ____
4. Construct a career ladder for the auto mfg. industry by indicating each possible DPT level. ________________________________

Check your answers on page 117.

Here is an optional practice activity to do on your own: You have just been designated as placement specialist in your agency. Your job description includes job development and you want to begin with touring a business run by a new board member who is president of PAMI (Photographic Apparatus and Materials Incorporated). Since you want to be prepared with good questions, you begin by searching the DOT for the industry. After reviewing this material, you draw up the following questions as beginners. Supply the tentative answers suggested by the DOT data that you might expect to get.

A. Are there any entry level jobs at PAMI?

B. What is the most skilled job in the plant that doesn't involve management or supervision?

C. What jobs do you have for inspectors?

D. What types of tools and equipment do your inspectors use?

UNIT VIII

INTERIM SUMMARY AND CASE PRACTICE I

Unit Objectives: 1. To review the essential parts of the DOT.
2. To provide practice in its uses in Vocational Rehabilitation.

We have now learned about each major section of the DOT and have practiced using the DOT on various rehabilitation-related tasks. Before moving on to studying DOT related materials, let's review what we have learned thus far.

First, we learned that a major function of the DOT is to provide occupational information by identifying the titles of occupations and then by providing information about:

WORKER ACTION	(Does what)
IMMEDIATE OBJECT	(To What/Whom)
INFINITIVE	(In order to)
GOAL	(To accomplish what)

We learned how statements by clients from case records can be diagrammed to organize the occupational information contained within them. This skill allows us to examine information and decide what is needed additionally. We also learned the parts of occupational definitions and the various types of titles.

Of the four ways of classifying occupations, we have thus far learned three: Occupational Group Arrangement; Data, People, and Things (aka* Worker Function Level); and Industry Designation. Each of these methods has uses in vocational rehabilitation. Now, as soon as we cover one final point, we will be ready for some final exercises to give you a chance to demonstrate your skills.

First, however, you should review the three ways of determining an occupational code and which methods to use under which circumstances. The three ways are:

-Use of OGA
-Use of Industry Designation
-Use of the Alphabetical Index

Please read pages xxv-xxvii in the front of the DOT. Note that the DOT authors are recommending that in most instances the preferred way is by use of the OGA but that the other ways are useful in certain circumstances.

Summary points from the reading:

- The most accurate way to determine the appropriate occupational title and code for a set of duties is via OGA.
- Obtain relevant data about the job such as action verbs: "tending"; "inspects."
- Use the OGA Summary (pages xxix-xxxvii) to find the OGA numbers most appropriate.

- Scan the OGA until you find both title and description which fit the data previously collected.
- The Industry Designations can be used when you have little other data but the industry. It is also helpful when client possibilities and/or interests are rather narrowly defined.
- The Alphabetical Index is used when you only have an occupational title-such as is found in a standard work history form. Now that you have learned that there are so many types of titles, you can see that the title is really not sufficient in itself. If you have to use it, confirm its appropriateness at the first opportunity.

The temptation to use the Alphabetical Index is difficult to avoid. In some cases it is a useful tool. In general, however, the accuracy of using OGA or Industry Designations more than offsets the very little extra time involved.

Case Practice #1

Here are two exercises which will give you an opportunity to use all of your DOT skills to solve some typical case practice problems. The cases are taken from actual records, although all names, places, etc. have been changed to maintain confidentiality. You may use any of the methods learned thus far to locate the required information.

Case History for Exercise #1

Name: Ronald Palumbo
D.O.B.: 3/22/55

Address: 31 Appian Road
Thomaston, RI
Current Age: 36

Education: High School graduate--1973
General course
"liked shop courses"

Service: "Right after high school me and this other kid volunteered for the Army. They sent me to school to be a redeye gunner and after I put in my three years, I got an honorable discharge in June of 1976."

Family: Married in September, 1976, to Elaine Watkins
Three children
Paul--16
Joseph--15
Ann--6

Housing: "We rented a house in Lawton for the past ten years but just bought a house in Thomaston when I got my new job. Thomaston is where my job is and it's only a few towns away from where we used to live. The house needs a lot of work on it but I'm handy at fixing things and my wife likes to decorate and all that. My boys didn't want to change schools but they had to anyway. Ann could care less where she lives."

Work History: (Ron relates this information)

After I got out of the Army, I found a job at Eastern Watch Company. They had me running an abrading machine that polishes watch parts. I put on the cleaning agent and then after the machine polished them, I had to inspect them to make sure there weren't any scratches and to make sure it fit the specs. I worked about two years on that. Then I quit that job and went to the Metalex Machine Company where I moved up to a job where I set up and operated a belt sanding machine to polish various metal parts. It was really the same kind of job except the machine wasn't automatic so it took more skill to set it up.

I had an idea I wanted to better myself so I took blueprint reading and metallurgy courses in night school under the GI Bill. These subjects were pretty interesting to me.

After about five years on the belt sanding machine, I bid on a better job as a roll grinder with the same company and got it. Because it was all short run stuff, I had to really be good with the blueprints and specs. But I had no problem with that job and I did it for nine years. During that time I took courses in supervision and management at night school though, so I could be ready if a real good opportunity opened up somewhere.

In July of 1991 I got lucky. I heard of this job opening at the J.B. Towne Machine Works in Thomaston. This is a small non-union shop and they wanted someone to supervise and coordinate their grinding operations in the shop. The guy liked my record and could tell I knew the work so he hired me. I felt good about this because it was more money and more responsibility which was just what I'd been working for all these years. I even started to think I'd go even higher with this outfit.

Anyway, I quit my old job. We sold the house, moved, and got the kids in school and all that by the middle of September, and I started work on October 1st. Things looked really good. The work was right up my alley.

Physical Problem:

"On January 5, 1992, I was home fixing the broken stair railing in the hall when I began to feel funny. My head and neck ached on the right side and I was dizzy. My eyes blurred and I threw up. I remember my right leg was weak, real weak. They took me to the hospital. Later they told me I had a stroke."

UNIT VIII, EXERCISE I

1. List the necessary information about Ronald's work history in the following columns. Include all positions since his graduation from school.

Job #	Base Title	Occ. Code	Indust. Design.	D	PT Key Words	T
a)						
b)						
c)						
d)						
e)						

2. Discuss Ronald's progress up the career ladder in terms of changes in the DPT levels. Was the progress logical and orderly?

3. Based on the case study, what evidence is there that Ronald has sought vocationally-relevant educational opportunities?

Note: We will hear more about Ron in Unit XX!

Check your answers on page 117.

Case History for Exercise #2

Name: Alice Pinkerton

D.O.B.: 9/14/71

Address: 4 Willow Road
Loyalton, NH

Current Age: 22

Education: Was in school for 14 years, mostly in special education classes. Was given "Certificate of Attendance."

Military Service: None

Family and Housing: Lives with elderly parents. Mother continues to express interest and concern for Alice's future. Father is in ill health and primarily concerned with keeping the family business - a small motel.

Work History: After "graduation" Alice was to attend a vocational training program but no referral was made. After two years at home she was referred to the local sheltered workshop. No formal vocational assessment was conducted and Alice became a "regular" workshop employee.

When a formal assessment program was established in 1992, Alice's performance and capabilities were reviewed. The workshop staff felt that she may be able to function at a higher level if she can be provided with more salable skills. Alice stated that "I like working with my hands and moving around rather than sitting down all the time. I still do some of the cleaning at the motel. I like things that move, like machines."

Disability: Mental retardation. Stanford Binet administered 11/5/91 showed I.Q. of 65. (See attached report).

Stanford Binet Date: 11/5/91
DOB: 9/14/71
C.AGE: 17-2
M.AGE: 8-2
I.Q.: 65

General Observation: Although Alice is small physically she seems to have matured in many other ways. Her attention span and test reaction were normal.

Test Results: Basal Age - Year VI
Ceiling Age - Year XI

Summary and Interpretation: Alice has improved in vocabulary, but showed no other definite strengths. There was a weakness in verbal abilities. Comprehension a marginal failure at both Year VII and VIII. Vocabulary was counted a success at Year V, but some responses were barely acceptable.

UNIT VIII, EXERCISE II

The staff is considering two possible placements at this time. Although they will be assessing the client in more detail, they ask you to provide them with DOT-related information about the characteristics of the four jobs under consideration. Using the statements below,

1. Look up the Occupational Title, Industry, and Occupational Code number for each possible job.
2. Diagram the major occupational definition statements for each.
3. List any other information which may relate to client history and stated interests.

A. A local shoe manufacturer is offering a one-week OJT* program to prepare workers to examine heels for defects, sort them into pairs, and record the necessary information on tally sheets. They list the job requirements as "long periods of standing and mobility, no lifting; must have good vision and tactile senses."

Occupational Title:____________________ Occupational Code#: ____________________
Industry Designation:____

WORKER ACTION IMMEDIATE OBJECT INFINITIVE GOAL

____

____

OTHER RELEVANT INFORMATION

____

B. A local furniture manufacturer is looking for workers to assemble frames for sofas and chairs. A six-week OJT is provided during which workers will be taught how to use power and hand tools to fit the pre-cut parts into a frame. Workers must be able to lift up to 30 lbs. and be able to use such measurement devices as squares and straight edge. The work environment is noisy and dirty.

Occupational Title: ____________________ Occupational Code#:____________________
Industry Designation:____

WORKER ACTION IMMEDIATE OBJECT INFINITIVE GOAL

____

OTHER RELEVANT INFORMATION

____

Check your answers on page 118.

Section Three

Relating Personal and Occupational Characteristics

UNIT IX

INTRODUCTION TO WORKER TRAITS

Unit Objectives:
1. To introduce the concept of Worker Trait Groups.
2. To introduce the Vocational Appraisal Summary form.
3. To present the organization of Units XI - XVIII.

Occupational Classifications Revisited

Thus far, you have learned three major ways in which occupations are classified:

- By Occupational Group Arrangement (OGA)
- By Alphabetical Index
- By Industry Designation (Ind.Des.)

The main volumes of the DOT contain all the information required to use these classifications, and in Section Two you learned how each is applied to career decision-making and the "yardstick" approach.

The fourth way in which occupations are classified was added to the DOT in 1965. The original name (and still the most widely used) is "Worker Trait Groups" (WTG)*. The DOT uses the term "GOE Group" (GOE)* and "Work Groups" which is regrettably very close to the "Occupational Group" used in OGA to describe the second level of specificity. Therefore, we will use Worker Trait Groups whenever possible. (In some publication, the terms "Interest Groups" and "Qualifications Profile" have also been used to describe this classification system.)

GOE groups organize occupations in a three-level system:

- First by INTEREST AREA
- Second by WORK GROUP
- Third by SUBGROUP

```
Please read 11-1 in the Revised HAJ for a summary of Worker Traits.  Then scan
the rest of Chapter 11.
```

Here is a summary of the points made and some inferences to be drawn about the GOE/Worker Trait classification system:

1. There are twelve broad interest areas into which all occupations are first divided. Research by the Labor Department identified them as distinguishing between occupations on the basis of broad interest requirements. (To be precise, the research suggested eleven such groups as being appropriate for classifying most occupations on the basis of interests.

The twelfth group was provided for the few occupations "left over.") Each group is identified by a two-digit number from 01 through 12.

2. Interest areas are divided into Work Groups containing occupations that require similar worker adaptability and capability. Work Groups are identified by adding a second set of digits to the interest area code, e.g., 01.01. Some interest areas have as few as two work groups; one interest area has twelve.

3. To achieve more homogeneous groupings of occupations by interest*, aptitude*, and adaptability requirements, subgroups add a third set of digits, e.g., 01.01.01. (This was not actually shown in the reading and is often not included in worker trait publications. If you have access to the data, however, it is a useful tool.)

Categories of Worker Traits and the Availability of Data

All eight categories of worker trait information were gathered as part of the job analysis research on which the DOT is based:

- Interests (the twelve areas of the GOE group; see Unit XI.)
- Temperaments (TEMP; see Unit XII.)
- General Educational Development (GED*; see Unit XIII.)
- Aptitudes (APT; see Unit XIV.)
- Specific Vocational Preparation (SVP*; see Unit XV.)
- Physical Demands (PD; see Unit XVI.)
- Environmental Conditions (EC*; see Unit XVII.)
- Worker Function Level (WFL; aka Data, People, Things, DPT; see Unit XVIII.)

All eight categories may be used to describe both occupational requirements and the ability of people to meet certain worker trait demands.

Unfortunately, information about the worker traits of occupations is not uniformly available. To date, the Department of Labor has released the data only in electronic, rather than print, format. Print copies are available from private publishers. The data is also contained in a wide variety of computer programs.

The exercises in Section Three of this manual require that you have access to worker trait data. If you have either print or electronic copies, they should be used since they will be complete. For those without access to the complete data set, Worker Traits for a selected number of occupations have been included in Appendix G. Besides allowing for completion of this manual, these data will give you a clear idea of data content and problems, as discussed in the next unit.

Note that of the eight categories of worker trait data, three are available on the trailer line in the DOT: GED, SVP, GOE. (One item from Physical Demand - strength - is also included in the DOT.) Since these data are available for all occupations, always use the DOT when you want information about them. Use the data in Section Four, however, for details about worker traits in the other five categories.

The Vocational Appraisal Summary

Worker Trait Groups are not without their weaknesses as will be discussed in Unit X. They are, however, a good tool in career counseling and planning. To help you understand how they are used, we will ask you to rate your own worker traits as part of Section Three. A blank Vocational Appraisal Summary (VAS) is included in Section Four, Appendix E, page 127.

Before you begin to use it, please make at least two additional copies for use in Unit XX.

In each of the units on individual worker traits, you will be asked to read some material in the HAJ, then do some exercises to test your understanding, and finally to rate yourself on that trait using pages one and two of the VAS form. Before moving on, let's look at the form and get the headings completed.

On page 1 of the VAS, enter your name and the date on line one.

Next, select three occupations in which you might be interested. They can include the occupation you now have, ones you would like next, or simply ones you have fantasized about. Fill in the Occupational Title, Occupational Code, and GOE group for each. (The GOE group can be obtained from the Trailer line in the DOT.)

Optionally, the occupational information may also be added to the top of page 2.

Now look at the column headings: In Column 1, key words and codes are for the various worker trait categories. The next column marked "NOW," is for your self-rating about each worker trait. Column 3, marked "POSS CHANGE," is used to indicate any change in the current rating that you feel is possible and desirable, "potential" if you wish. Column 4, "RATING SOURCE," shows the degree to which the ratings are a reflection of judgement and opinion, a matter of record, or work history. (The rating codes are shown at the bottom of page 2.) After you have rated yourself on a worker trait, enter one of the three codes here.

The last three columns on the form are for entering information about the worker trait requirements for the occupations you named at the top of the page. If you have access to all worker trait data, fill in these column as you go. Otherwise, see your instructor for assistance.

Remember, you will get specific instructions in each Unit for completing a section of the VAS. Don't get ahead!

UNIT X

USES AND ABUSES OF WORKER TRAITS

Unit Objectives:
1. To explain the basic elements of Worker Trait Theory.
2. To identify the major problems associated with use of the DOT in Job Matching.
3. To identify appropriate uses of Worker Trait Groups in Career Decision-Making.

Job Matching Concepts

The approach to career decision-making referred to as "Matching" (or, more frequently "Job Matching") has been used for at least a hundred years. It is based on the premise that jobs have identifiable requirements or "Factors" while people have job related "Traits." "TraitFactor" theory assumes "...a straightforward matching of an individual's abilities and interests with the world's vocational opportunities can be accomplished and once accomplished, solves the problems of vocational choice for that individual." (Osipow, S.H., 1983, Theories of Career Development, Third Edition. Englewood Cliffs, NJ: Prentice-Hall, Inc., pp. 9.) The "yardstick" approach used in this manual is an example of Trait-Factor theory.

While called into question by many, this approach has strongly influenced vocational rehabilitation, vocational assessment, and school-to-work programs. At the simplest level, service plans are written to assist in preparation of a person for an occupation based on identified differences between job requirements and personal characteristics. Especially in recent years, it has become clear that such "discrepancies" between the characteristics of a person and the requirements of a job can be altered in several ways either before or after actual job placement:

- Provide services to change client characteristics.
- Reasonable accommodation to eliminate job barriers.
- Job restructuring of major job tasks.
- Rehabilitation technology services to compensate for functional limitations.
- Transitional or on-the-job training services after placement to address discrepancies.
- Supported employment services wherein a job coach provides systematic training while assuring that the demands of the job are met.

Thus, it is neither necessary nor acceptable to discard occupations from consideration on a "match/no match" basis. Whether or not a match exists in a specific person/position situation depends primarily on the availability of resources to address identified discrepancies.

The principal danger in using Trait-Factor theory is the assumption that, in and of themselves, discrepancies mean a "bad" match. This is heard in statements such as: "He can't be a mechanic; they have to lift much more than he can manage with his bad back." When this approach is taken, the occupation is eliminated from further consideration before interventions which might result in successful placement are considered.

Too often this occurs when computer-based job matching systems are used by persons who understand neither worker trait theory nor the software program being used. Without precautions, a person's limitations entered during a computer search will exclude occupations where those characteristics are required. Since subsequent consideration is focused on occupations which "match" entered characteristics, occupations for which a discrepancy might be effectively addressed are not even considered.

On the other hand, presentation of information to the individual about the discrepancies between personal characteristics and job requirements contributes to personal growth in the decision-making process and consideration of alternative strategies as described earlier. In this manner, the "yardstick" approach becomes a method by which consumers and staff focus on the real issues.

An additional problem occurs all too often in the job matching process. To understand it, we must again consider the way in which DOT information was developed.

As you know, DOT data were collected via thousands of job analyses by Labor Department staff. Data about these individual JOBS were aggregated to the OCCUPATIONAL level and thus may no longer reflect the specific duties and requirements of a JOB, much less a SPECIFIC POSITION. People fill positions, not occupations; thus, a person/occupation match is inappropriate until refined by staff to include the rich possibilities for variation among positions. To assure that "apples are being compared with apples," the correct wording is PERSON/POSITION MATCHING, not PERSON/JOB or PERSON/OCCUPATION MATCHING. Admittedly, we all say Job Matching, but we must think and act on the basis of Person/Position matching for the protection of our clients and ourselves.

One final note: many first-time users are bothered by the application of code numbers to people, fearing that they will become negative labels. This concern is not without merit! However, worker traits are actually plain English descriptors and should be used in that manner only. The letter and number codes are for convenience only; if you don't like them, don't use them. Indeed, the English equivalents are much more appropriate for use in narrative reports and client contacts. The obvious advantage of using codes in speeding up communication between individuals who understand them and in computer programs need not result in demeaning labels being applied to people. Rather, they can be used to facilitate communication. Responsible usage is a must.

Uses of Worker Trait Groups

With the proper cautions about potential misuse of worker traits clearly in mind, let's look at appropriate uses. There are two major ways in which worker trait groups are useful in career decision-making. Combined, they make this organizational structure an extremely useful tool for staff and clients.

1. Worker traits may be used to organize information about people in vocationally relevant terms. By expressing case information in worker trait terms, we identify what is known about the person as a worker. Without this translation, it is difficult at best to determine the vocational significance of personal characteristics. For example, knowing that a person reads at grade level 7.8 becomes vocationally relevant only in relation to an occupation, job, or position. While we may have a good feeling for the significance of that information in relation to lawyer

and street sweeper, it tells us little about the extent to which s/he will be able to read technical manuals required in auto mechanics. If, however, this information is translated into the language of worker traits, the result can be compared with the requirements for any occupation.

VOCATIONAL HANDICAPS CAN ONLY BE DETERMINED IN RELATION TO AN OCCUPATION, JOB, OR POSITION BECAUSE ONLY THEN DO WE KNOW WHETHER DISCREPANCIES BETWEEN CLIENT ABILITY AND OCCUPATIONAL REQUIREMENT ARE SIGNIFICANT.

There is an added benefit from taking the time to translate case information into worker trait language: once done, the results can be quickly compared with any of the 12,741 occupations in the DOT. Thus, if the first effort at matching doesn't yield the desired results, the summary of the client in worker trait language can be immediately compared to any other occupation. So, worker traits first provide a common language between clients and occupations that can be used in multiple job matches.

2. Of the four occupational classification systems, Worker Trait groups is the easiest to use directly with career decision-makers. Grouping occupations first by interest and then by requirements has high face validity for most people; the terms used in the individual worker trait descriptions have generally accepted meanings; the structure is easily incorporated into most counseling approaches; many of the most widely used career interest and exploration approaches already yield references to appropriate worker trait groups. Thus, worker traits are very useful in direct work with clients. With only a four-digit GOE group code, career counseling and exploration can begin.

The assignment of occupations to interest areas and worker trait groups is logical and can often be estimated from the title. The next exercise asks you to look at some occupations and guess the GOE group. The only reference book you need for this is the HAJ, Chapter 11. Here is an example of that process:

Johnny Steinbeck wants to be a writer and create the great American novel. Look at the GOE groups in the HAJ. Skim the titles (Interest Areas) until you find one that seems appropriate. Then read the four digit breakouts (Work Groups). In this instance, Interest Area 01, ARTISTIC seems to fit and so does WTG group 01.01, LITERARY ARTS.

UNIT X, EXERCISE I

For each of the following occupations, estimate the four digit Worker Trait Group. Then check your answers in Section Four, p. 112.

WORKER TRAIT GROUP

1. HORSE TRAINER ____________________
2. BIOLOGIST ____________________
3. DANCER ____________________
4. LASER TECHNICIAN ____________________
5. SOCIAL WORKER, SCHOOL ____________________
6. UMPIRE ____________________
7. BARTENDER ____________________
8. SALESPERSON, JEWELRY ____________________
9. CHEESE GRADER ____________________
10. ROUTING CLERK ____________________

Check your answers on page 118.

UNIT XI

GUIDE TO OCCUPATIONAL EXPLORATION INTERESTS

Unit Objectives: 1. To explain the concept of GOE interests as applied in career decision-making.

Background

The word "interest" has many meanings but as used in career decision-making, means "liking" or especially "preferring" some work activities to others. Both traditional "client centered," and the newer "client as full participant" approaches to the decision-making process stress the importance of interests and individual participation in decision-making. Thus interests are apt to be a starting point in career counseling.

The 1965 DOT used an approach to interest that assumed work-related interests to be bi-polar in nature. Five pairs of interests were used. Each pair contained terms that were more or less opposites - such as a preference for activities that were routine and concrete in nature VERSUS activities that were abstract and creative. The 1979 DOT replaced these interests as a result of research suggesting that the earlier approach simply didn't account for differences among occupations. The replacement structure divided all occupations into twelve groups based on general interests. (As you read in Unit IX, the research suggested that 11 such groups accounted for nearly all of the occupations; a twelfth group was added for the remaining 40 occupations - rather like the "Not elsewhere classified" 9's in OGA.)

Types of Interests

In both classification systems, a person's preference for certain work activities can be seen as one tool useful in determining (or confirming) occupational interest. Actually, there are three categories of work-related interests that need to be considered:

1 Stated interests: what a person says about her/his vocational preferences and aspirations

2 Measured interests: his/her responses to a standardized measure of career interest

3 Demonstrated interests: the types of activities in which the person actually engages and his/her tendency to persevere and become accomplished.

In general, when these three types of interests are consistent and focused toward a small number of work areas, a person is apt to be ready for career decision-making. Indications that further exploration is needed include an inability to state work-related interests, flat profiles on standardized interest measures, and wide divergence among the above three categories of interest.

Please study the Planning Model in Appendix F, page 129. Persons in Groups 2 and 4 likely require exploration before making a career choice but for different reasons. See if you can explain why.

Demonstrated interests are assessed through work history which can be discussed with the person, the employer, or obtained through use of the DOT data as shown in Section Four, Appendix G. Vocational assessment activities can also be used for this purpose. Measured interests are obviously derived from test and inventory results. Of particular value are those measures that express interests in GOE format. For example, The Harrington-O'Shea Career Decision-Making System is but one of the many measures that yield four digit GOE interests.

Stated interests are simply expressions of interest by the person as to what s/he wants to do for work. Caution: personal statements of interest are more apt to be an accurate reflection when stated in terms of ACTIVITY TYPE rather than OCCUPATIONAL TITLE. Many more people have a good idea of the type of work activities they prefer than are able to name using the exact DOT title. Therefore, users with limited work history or sophistication often encounter difficulty responding to inventories that probe for interests by giving occupational titles. Even an expert like you might have difficulty responding to questions such as "Would you rather be an OFFAL ICER or a HARDENER?" without reaching for your trusty DOT. Some users will have just as much difficulty responding to "Would you rather be an ELECTRICAL ENGINEER or a COMPUTER ENGINEER"! The amount of occupational information a person has may significantly influence her/his ability to state interests.

The new interest structure is identified in the DOT and HAJ as Guide for Occupational Exploration (GOE). Originally, GOE was a publication of the Labor Department. It also appeared as an update by a private publisher as a "second edition." Unfortunately, no one has yet seen fit to publish another version that includes the updated information from the revised fourth edition of the DOT, and both earlier editions are essentially out of print.

Please read pages 11-2 through 11-4 in the HAJ.

In Exercise 1 of Unit X, you saw that interest group assignment could be estimated for occupations. Now, let's look at the same process for people. To do this, complete the first section of the Vocational Appraisal Summary in Appendix E to show your work-related interests. Show them as they are, given your present situation, and as they might be under different circumstances. (If you don't think they would change, leave the second column blank.) Be sure to complete the RATINGS SOURCE column.

Here are some clues:

> Some of the interest areas will reflect jobs you have had in the past or the one you currently have. Put Y or N or ? on each line to indicate your current feelings about the type of interest. (Since no one else will see this, you may want to emphasize some of your ratings with marks such as !XXGRRRRRR&! etc. It is not uncommon for career decision-makers to feel this way. A balance between strong preferences and strong dislikes is one sign of career maturity.)
>
> Don't forget to include hobbies or leisure activities in your thinking. For some, this is the primary source of self-rated preferences vs. dislikes.
>
> Your preferences for school subjects and activities may also be used to suggest interests.
>
> Remember, you are rating preferences for certain types of activities. Try to avoid thinking about specific jobs at this point. Also, preferences need not be completely compatible with self-rated ability.

A final word about using self-rating forms to assist decision-makers to identify their own vocational characteristics: the concepts involved are usually abstract and thus difficult for people who tend to deal with tangibles versus abstracts. You can often help such people by providing them with specific instances where these interests might be satisfied. However, you also run the risk of biasing a response by the selection of examples. Therefore, always have at least one other data source for self-rated items where there is reason to believe that the person may have had difficulty self-rating.

Now that you have rated your preferences for work activities, use the DOT to complete the GOE information on the three occupations you are considering. Since each occupation is assigned to only one GOE group, there should only be one Y in each column.

When the data is entered, study your preferences in relation to the GOE for the occupations in which you are interested. Hopefully, you will see that this activity is a) fairly simple to do, b) can be done with most decision-makers as an assessment activity, and c) can be used in the career counselor process.

UNIT XII

ESTIMATING TEMPERAMENTS

Unit Objectives:

1. To explain the concept of Temperaments.
2. To identify resources helpful in understanding and rating Temperaments and the work situations in which they are required.
3. To explain uses of the HAJ to determine the Temperaments involved in occupations.

Introduction

In every occupation, the worker is presented with situations to which he/she must adjust. The worker's ability and willingness to adapt to these situations is referred to as temperament. Job analysis experts have identified eleven types of Temperaments found in paid employment.

Please read in the HAJ 10-1 - 10-5 to learn about Temperaments.

Most jobs require workers to adjust to more than one of these situations. You can probably estimate the Temperaments for many jobs.

Unit XII, Exercise I.

For example, match the occupations in the right-hand column with the temperament pattern on the left. Place the number for each occupation next to the most likely Temperaments. Use HAJ 10-1.

Temperaments		Occupation
_______	R	1. Airplane Pilot
_______	VSTJ	2. Piano Tuner
_______	RU	3. Materials Handler
_______	EJT	4. Sculptor
_______	JT	5. Clerk Typist

Check your answers on page 118.

From the above exercise, you now know that different occupations require different temperaments - those required by sculpting are different from those required in typing. You also will have noted that occupations may have some of the same temperaments. Thus the sculptor, the pilot, and the piano tuner all must adapt to situations requiring the temperament "J" and, in addition, they must adapt to other work situations. In discussing Temperaments with someone, you might find yourself saying "So you think you could adjust to work situations requiring performing a variety of duties, but are you unwilling to be responsible for planning and directing activities of others?"

Now that you have read about Temperaments, it is time to rate yourself. Please turn to the VAS in Section Four and complete the activity entitled Temperaments. As you rate yourself, consider your work experience, hobbies, and school activities. You may use the Handbook examples to help you make decisions. Remember, Temperaments should be self-rated on the basis of both ability and willingness to adapt.

As we said earlier, perfect job/person matches are very rare. On the other hand, too many conflicts will make satisfactory work adjustment difficult. However, vocational rehabilitation services can be provided to improve the job/person match. For example, if an occupation requires planning and directing an entire activity and a person feels unable to adapt to this situation, counseling or specific remedial services may be available, or a particular placement where that task done by someone else may be found, or supportive employment services might be considered.

Unit XII, Exercise II

Let's try an example using INSTRUCTOR, DANCING. Look up the Temperaments for this occupation, and list them in the left hand column. Look up the occupational definition and record action words and phrases which document the need for these temperaments. Use the column on the right to list these.

Temperaments	Key Words/Phrases
______	____________________
______	____________________
______	____________________
______	____________________

Check your answers on page 119.

The eleven Temperaments can also contribute to a decision about the type of services appropriate for vocational assessment.

Think of a particular rehabilitation service in your area.

- Which Temperaments can be assessed there?
- Are the work and supervision provided clients suitable for just a few Temperaments, such as R and U?
- Would you expect that service to be able to evaluate clients when you want to know about temperament patterns D,I,V,S,J?

Although there is no way to "check" the answers to these questions, this exercise should help you:

- Identify another use for Temperaments,
- Decide whether you have sufficient information about the rehabilitation services available to your client,
- Decide among services for a specific client.

You can get clues about your clients by applying Temperaments and interest statements made by clients about their experiences. Although it is not possible to get clues from every statement and it is essential that we not make decisions until we see consistent patterns in the data, use of these and other yardstick indicators help.

Unit XII, Exercise III

List the most likely Temperaments and interest clues contained in these client statements about their work experiences. Remember, they are only clues!

	Temperaments	GOE Group
1. "I direct the local orchestra."		
2. "I fed data into the computer."		
3. "I called customers to get them to buy insurance policies."		
4. "I organized a new sorority in college."		
5. "Last summer I liked my job. I ran a machine which attaches felt bands inside hats."		
6. "I worked as a fire fighter for the U.S. Forest Service."		
7. "I was responsible for all of the vocational evaluations at our center."		
8. "I performed surgery and specialized in brain tumors."		

Check your answers on page 119.

UNIT XIII

ESTIMATING GENERAL EDUCATION DEVELOPMENT (GED)

Unit Objectives:

1. To explain the concepts included in General Education Development.
2. To identify resources useful in determining GED levels for people.
3. To explain uses of Temperaments to determine the GED levels for various occupations.

Introduction

General Education Development is a method of summarizing the general results of formal and informal education in three subareas:

1. Reasoning Development - includes demonstrated ability to use data to decide on a course of action and correctly follow directions.

2. Mathematical Development - includes demonstrated ability to use numbers and mathematical symbols as "tools" in accomplishing tasks.

3. Language Development - includes demonstrated ability to use writing, reading, and speaking skills as "tools" in accomplishing tasks.

Each of these subareas is arranged in hierarchical form with the number 1 used to represent the lowest or simplest level and the number 6 representing the highest or most complex level.

> The rationale used for the GED definitions is described in the HAJ 7.1 - 7.13. Please note that similar definitions can also be found in the DOT pages 1009 - 1012. Review all these sections so that you will feel comfortable with the concepts of GED.

When job analysis data are collected, the levels required in all three subareas (Reasoning, Math, Language, hereafter abbreviated as RML) are determined. A single number is then assigned to represent the GED level as a whole. The number chosen is the HIGHEST number reflected by reasoning, mathematical, or language.

For example, if an occupation is found to generally require level 3 in reasoning but only level 2 in math and language, the total GED level will be listed as 3.

Obviously, many people have uneven GED skills and abilities. By using RML detail, we can refine the job/person match and make it more helpful in predicting and assuring successful vocational rehabilitation outcomes.

Remember that GED skills can be obtained through formal studies or through life experiences. Here is a table that provides GENERAL GUIDELINES ONLY. Use it cautiously!

GED LEVEL	FORMAL EDUCATION	EXPERIENCE
6	Graduate degree.	Outstanding, creative accomplishment.
5	Undergraduate degree.	Professional, administrative, artistic or civil accomplishment.
4	High school graduation with college preparatory courses or Voc. Technical curriculum.	Successful work experience in an organized work technology.
3	High school graduation with less demanding curriculum.	Successful work experience requiring common sense understanding to solve problems.
2	Successful completion of elementary school and/or some high school.	Successful work experience involving standardized duties.
1	Completion of less than elementary school.	Can read safety signs, follow simple directions, make change.

Notes:

1. If in applying this table, you find that some clients have had experiences at levels different from their formal schooling, the experience is usually a better estimate of their GED.

2. In evaluating education and experience, consider the extent to which it is recent. Many people find that GED skills "rust" quickly!

Turn to the Appendix E and complete the GED section as instructed. Use the Handbook examples (7-2) to rate your own GED skills.

NOTE: It is very important to keep current ratings at levels you would expect to be able to handle without practice or refresher. However, be sure to credit yourself with being able to re-capture skills you have demonstrated in the past. "Rust" can be removed!

UNIT XIII, EXERCISE I

Now that you have rated your present and potential GED levels, let's try a practical problem. Your client has difficulty with math, but wants to be a Brake Operator. Based on her training, education, and experience, you and she have agreed on ratings of R=3, M=2, and L=3. She does not want additional training. You note that there are two listings for Brake Operator. Read their occupational definitions in the DOT and decide which occupation is most likely to be appropriate. Write a few key phrases to defend your answer.

Brake Operator I II (circle one) occupation is most suitable because:

Check your answers on page 119.

In unit IX, it was suggested that as you completed a worker trait section, you also filled in information about related requirements in the occupations in which you expressed interest. Lets look at the process of completing a section of the VAS in a little more detail.

You began by entering current ratings of your Reasoning, Math, and Language skills in column 2. In column 3, you recorded any higher levels you think possible. Column 4 was used to indicate the type of information you used to make your self-ratings. Suggestions are shown at the bottom of page two of the VAS, but you may add others.

In columns 5, 6, and 7, you entered the RML requirements for each of the three occupations in which you expressed interest.

Look at the requirements for each occupation in relation to your current self-rating. If the former is higher, circle it to show a discrepancy between what is required and your current self-rating. A discrepancy only means that this factor needs to be considered in any plan to pursue this occupation; it DOES NOT mean that the occupation is unrealistic. Now look at your rating in column 3. If your rating is still below the occupational requirement, darken the circle around the occupation to show the increased importance of the discrepancy. That suggests that you may want to reconsider the occupation, acquire technology to compensate for the discrepancy, or find a specific job where the requirement is lower.

Before moving on, let's take a minute to consider the potential value of asking decision-makers to rate their own skills and potentials.

In general, people generally achieve at levels consistent with self-perception. Thus, when a person perceives his/her potential as sufficient for a task, the chances for successful outcome are good.

Secondly, by encouraging self-rating of vocationally relevant personal characteristics and then relating them to job requirements, increased participation in rehabilitation planning and decision-making becomes a reality. Of equal importance, the vocational activity becomes a vocational exploration experience in itself.

Finally, self-assessment activities can be used to expand and deepen the counseling relationship between practitioner and the decision-maker. Self-rating is used by the counselor to focus discussion on vocational decision-making.

We hope you will realize the many benefits that derive from use of these DOT-related materials with clients. In subsequent units, we will discuss additional uses and some of the application techniques.

UNIT XIV

ESTIMATING APTITUDES (APT)

Unit Objectives:

1. To explain the concept of Aptitudes.
2. To identify resources helpful in understanding and rating Aptitudes demonstrated by people.
3. To explain uses of the HAJ to determine the Aptitudes required for various occupations.

Introduction

The word Aptitude is used to refer to many different personal characteristics. It is frequently used to mean the same thing as ability or achievement. In this manual, these three words have distinct meanings:

Achievement - what you have accomplished - (Past)

Ability - what you can demonstrate - (Present)

Aptitude - the quickness or ease with which you learn - (Future)

The Department of Labor identified 11 Aptitude areas as being particularly relevant for average successful performance on jobs. They also use five levels to identify the amount of Aptitude required for a group of occupations or demonstrated by a person.

> Please read about the Aptitudes and their levels by reviewing HAJ 9-1 through 9-34. If you want examples for work tasks which require each Aptitude at the various levels, they begin on 9-2. As a minimum, read the brief explanation of each Aptitude found at the beginning of each example set in the Handbook.

Now that you have read the explanations of the Aptitudes and their levels, rate yourself on each Aptitude. You may use the examples in the Handbook to decide among levels.

> Turn to the VAS and complete the self-rating activity. After that, complete the same information about the Aptitude requirements for the occupations in which you expressed interest. Use the information in Section Four, Appendix G, see the instructor for assistance.
>
> When you have done this, circle those occupational requirements that appear to be higher than either of your self-estimates. This indicates that the occupation may require learning at a level higher than you think you can achieve.

Obviously, both sides of the Yardstick may need some revisions before deciding that an Aptitude requirement is significantly greater than your Aptitude. There are at least two types of questions which should be asked:

1. Were you accurate; did you overestimate or underestimate your ability?

You could answer these questions by looking again at your history or by using assessment techniques such as tests, work samples, etc.

2. Does the Aptitude data reflect the actual requirements for an individual job or position that you might consider?

Answers to this question require more occupational research by means of interviews or actual observation of workers on the job. A good beginning is to review the occupational definition to see if it contains information that suggests the types of Aptitudes involved.

Sometimes, you may conclude that a client's self-ratings are accurate and that most positions in the occupation will require Aptitude levels above those of the client. That doesn't mean the client must find a different occupational goal since selective placement or job modification may be options. You may wish to consider a longer training program to help the client learn the skills required for a particular job. Some Aptitude levels do not change as a result of training and practice; others do. By using the Occupational Yardstick, however, you will identify the most likely problem areas.

UNIT XV

ESTIMATING SPECIFIC VOCATIONAL PREPARATION (SVP)

Unit Objectives:

1. To explain the concepts of Specific Vocational Preparation.
2. To identify resources useful in understanding and rating the amounts of SVP to which people aspire.

Introduction

Specific Vocational Preparation is the amount of time required to learn the techniques, acquire the vocationally significant information, and develop the skill required for average successful performance as a qualified worker. SVP is specific, vocationally related training as distinct from GED, which is the general development of reasoning, math, and language abilities. Success in occupations requires a combination of both SVP and GED.

SVP can be obtained in a variety of settings:

- Vocational Education
- Apprenticeship Training
- In-plant Training
- On-The-Job Training
- Experience in one job that is preparation for a higher level job

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The concept of SVP and details of its contents are found in HAJ 8-1 through 8-10.
Please review this section so that you feel comfortable with the concepts of SVP.
```

It is important to understand the differences between GED and SVP as related to client history. The titles themselves are helpful in that GED refers to general learning while SVP relates to the specific time required to learn the techniques and skills of a particular occupation. (Normal orientation time is not included in either GED or SVP.)

UNIT XV, EXERCISE I

1. Here are some examples taken from client histories. Indicate whether they refer to GED, SVP or are simply work experience.

    a. Completed high school in the general studies program. __________
    b. Spent two years in trade school. __________
    c. Majored in Liberal Arts in college. __________
    d. Three years in a plumbing apprenticeship. __________
    e. Ten years as a cost accountant. __________
    f. Six-week course in selling sponsored by my company. __________
    g. Two years as a co-pilot before becoming a pilot. __________
    h. Two years as a rehabilitation secretary before becoming a rehabilitation counselor. __________
    i. Half-time training in quality control taught by the QC Technician. __________
    j. Two days orientation as produce clerk at A&P. __________
    k. Graduate degree in psychology. __________

2. Use the Handbook as a guide in deciding the probable SVPs in the following occupations:

    a. Surgeon
    b. Criminal Lawyer
    c. Trucker's Helper
    d. Barber
    e. Laundry Route Driver
    f. Electronic Trouble Shooter
    g. Mail Order Clerk
    h. Nurses Aide
    i. Salesperson, high fashion clothing

Check your answers on page 119.

Application of the SVP code numbers to people requires that we understand another difference between GED and SVP. Ability to successfully complete training is primarily a function of GED and Aptitude. Willingness to devote the required time is SVP.

Thus, when we ask a person to think about the SVP for an electrical-appliance repairer, we are asking about his/her willingness to invest the one-to-two year preparation usually required. We are not asking if they feel they have the ability to learn the specific skills or work with the tools and equipment. Also, we are not asking if s/he has the financial resources to pay for training. As important as these factors may be, they are not part of SVP.

A critical factor in "willingness" is recognition that students, trainees, and apprentices usually have to accept a subordinate role - they are assigned to helper or "flunky" tasks. Workers with prior experience in another occupation frequently find this loss of status very difficult to accept. Also, family members may express their objections to the learner role by urging the person to "quit and get a real job." You have probably known people who failed to adequately consider the time required to prepare for an occupation. Such people find that in dreaming of "being a fully qualified worker in a specific occupation," they didn't consider the stressful, time-consuming process of "becoming" qualified. SVP self-ratings can be very useful preplanning and counseling tools!

Please turn to the Appendix E, page 127, and rate your own SVP.

UNIT XVI

ESTIMATING PHYSICAL DEMANDS (PD)

Unit Objectives:

1. To explain the concept of Physical Demands.
2. To identify resources helpful in determining the physical demands which clients are able to meet.

Introduction

Even when we are not concerned with the special placement problems of persons who are physically disabled, we recognize that the demands for bodily movement and strength must be considered in the person/job matching process. For the disabled, these factors are even more significant.

`Please review 12-1 through 12-9 in the HAJ to understand the twenty Physical Demand (PD) factors and situations in which they are and are not important.`

You should have noted that considerable judgment is required to decide whether a factor applies to a specific occupation. For example, for dining car waiters/waitresses and flight attendants, balancing (PD #3) is a requirement; however, waiters and waitresses in regular restaurants need not have unusual balancing skills.

Also you should have noted that except for strength (Physical Demand #1), the factors are defined in terms of the percentage of time workers typically have to perform them. (See pages 12-14 in the HAJ for details.)

`Please rate your own Physical Demands on the VAS. Also rate the Physical Demands for the occupations in which you expressed interest.`

Often, DOT definitions contain hints about required Physical Demands in an occupation. Compare demands as recorded in the GOE and try to decipher whether they are likely to be inherent in the occupation itself and are thus considered "essential duties." If it appears that a demand is primarily in "May" statements, it is often negotiable as a reasonable accommodation.

It may be that discrepancies between physical capacities and Physical Demands can be resolved by general conditioning or as a result of restoration services. Alternatively, it may be possible to restructure the job itself, provide tools and machinery to reduce its demands, or simply find employment where the usual demands of the occupation are not required. All of these alternative methods of resolving the inconsistency should be considered before concluding that the person/job match is inappropriate. Identification of such problems and consideration of alternative solutions are two critically important functions of the rehabilitation worker.

This is a good place to remind you of the cautions presented in earlier units about important differences among positions, jobs, and occupations. Although the DOT data suggest frequent lifting for a given occupation, that is at a much broader level of generalization than a position. You may well find it possible to locate positions where the requirement is less or even absent.

It is very important to remember that the information about Physical Demands (and Environmental Conditions) was based on job analysis and requirements for "average, minimal, successful performance." Possibilities for reasonable accommodation, job modification, or restructuring were not considered. Thus, DOT data may not be used to decide that a client cannot function in an occupation. Rather, these data suggest areas where further study about the actual and possible match is needed. Only review at the person/position level will result in information needed to protect both the person and the employer. It is up to the professional to obtain such additional information as is necessary to decide whether or not a satisfactory match can be developed.

A variety of publications deal with job modifications. One such document dealing very specifically with job modifications for the physically disabled using a DOT-based approach is:

> Alfred, W.G., An Inventory of Job Options for Persons with Upper Extremity Impairments and Less Than a College Education. Houston, Texas: Rehabilitation and Training Center No. 4, Baylor College of Medicine, the Institute for Rehabilitation and Research, 1979.

Reasonable accommodation software and bulletin boards are available from a variety of sources.

UNIT XVII

ESTIMATING ENVIRONMENTAL CONDITIONS (EC)

Unit Objectives:

1. To explain the concept of Environmental Conditions.
2. To identify resources helpful in determining the Environmental Conditions to which individuals are able to adapt.
3. To explain uses of the WTG Guide in determining the Environmental Conditions of occupations.

Introduction

The physical surroundings of a person/position's setting make demands on one's physical capacities over and above those made by the work itself.

For example, a structural-steel worker has to lift, climb, balance, stoop, kneel, etc., which are Physical Demands of the occupation. Also, however, such workers are confronted by demands on their physical capacities by the conditions under which they work - bad weather, excessive cold, noise and vibration, etc. It is these demands that are called Environmental Conditions in most DOL publications but sometimes the term Working Conditions is also used.

Please review explanations and examples in the Handbook, 12-9 to 12-13. The Handbook provides very detailed and specific guidelines for use in rating occupations as regards Environmental Conditions.

As with other Qualifications Profile factors, considerable judgment is involved in applying the working condition factors to jobs. An occupation which requires a worker to use an ordinary refrigerator many times a day is not considered to be exposing the worker to the Environmental Condition factor of cold. Although the worker may handle cold items, he/she works at room temperature. On the other hand, a meat cutter may have to spend hours in a walk-in-refrigerator and is, thus, subject to extremes of cold.

You should also have noted that some of the factors require technical knowledge. The noise and vibration factor, for example, is used only when noise is persistent enough to "cause marked distraction or hearing loss...if endured day after day." If you are concerned about the possible effects of noise on a potential person/position match, more technical advice should be sought.

Please turn to Appendix E, page 127, of this manual and complete the self-rating exercise.

We can obtain general information about both the Physical Demands and the Environmental Conditions of occupations by reviewing the task descriptions in the DOT. In addition, the Trailer Line provides the amount of Strength typically required.

UNIT XVII, EXERCISE I

Look up the definitions for AIRPLANE INSPECTOR and WATER QUALITY TESTER in the DOT. Answer the following questions about the Environmental Conditions involved in these occupations.

1. Read the task statements in each description. List key phrases that suggest the PD and EC factors you think are most likely to be present.

   Airplane Inspector ____________________

   Water-Quality Inspector ____________________

2. What key word(s) or phrase(s) would lead you to assume that the AIRPLANE INSPECTOR might have to adapt to outside as well as inside work?

   ____

3. Is the AIRPLANE INSPECTOR and/or WATER-QUALITY TESTER more likely to be exposed to noise and vibrations? ____________________

4. Which occupation is most likely to involve hazards?

   ____

5. Under each title, list the most likely Environmental Conditions to which each worker would be subjected.

AIRPLANE INSPECTOR	WATER-QUALITY TESTER
____________	____________
____________	
____________	
____________	
____________	
____________	

Check your answers on pages 120.

Go ahead and enter the most likely Physical Demands and Working Conditions for each of the occupations you listed in the VAS. Use all of the materials previously discussed to make your judgments.

When you have finished, compare the ratings in Columns 1 and 2 with those in 5-7. Circle any of the working conditions if they are more demanding than your self-ratings.

Before we leave the subject of Environmental Conditions, it is good to remember that the process of comparing the conditions of occupations with the characteristics of clients can be made easier by any of the following activities:

- Discussing with the clients the sub-factors to make sure that they understand them.
- Discussing with the clients their reasons for the self-ratings, especially the extent to which physical factors - versus willingness - played a role.
- Reviewing medical data on the client to determine its vocational relevance.

- Obtaining a description of the Physical Demands and Environmental Conditions required for a particular occupation for which a client is being considered. This description can be reviewed by a medical consultant or treating physician to determine whether the client could perform satisfactorily.
- Having the client visit a job site in which he/she is interested and review the actual work characteristics.

By using these and other activities, the rehabilitation worker encourages client participation in the rehabilitation planning process, thus increasing the amount and quality of occupational information for all concerned.

UNIT XVIII

ESTIMATING DATA, PEOPLE, AND THINGS (DPT)

Unit Objective: To explain the concept of DPT as a tool in assessing the work characteristics of people.

Introduction

The basic concepts of DPT were presented in Unit VI and need not be repeated here. You may wish to read Chapter 3 in the HAJ as a refresher. Note that samples of tasks at each DPT level are provided.

```
UNIT XVIII, EXERCISE I

As a refresher for the work you did in Unit VI, please complete the following:

1. The higher the DPT number, the ___________ complex the task.
2. Each DPT level is identified by use of an ____________________ as well as
   by a number.
3. In the DOT, occupations are arranged within the OGA, then by DPT.  Thus, the
   _____________ complex occupations are listed first.
4. As the complexity levels of People or Things increases, the complexity level
   of Data ________________.
5. Which occupation has the highest requirements for Worker Function Level:
   AIRPLANE INSPECTOR or WATER-QUALITY TESTER?

Check your answers on page 121.
```

The worker function level required for an occupation may be determined simply by looking at the middle three digits of the occupational code.

```
Please record the ratings for each occupation in which you are interested on the
VAS in Appendix E, page 127.
```

We also want to be able to apply the concepts of DPT to people. Although it is often difficult to "summarize" all of a person's characteristics into a three digit code, we think you will find it helpful as a way of describing both present capabilities and potentials. By using the examples of each DPT level provided in the HAJ, you will be able to decide the approximate level of your own ability and potential in each of the three areas.

```
Please do that now.
```

Before we leave the worker function levels once again, there are two other characteristics of DPT about which you should know; first, the THINGS hierarchy can be further refined to identify relationships to machinery. Five of the levels specifically involve the worker with machinery:

0 - Setting-up
2 - Operating-Controlling
3 - Driving-Operating
5 - Tending
6 - Feeding-Offbearing

The other three levels (1 - Precision Working, 4 - Manipulating, and 7 - Handling) may involve machinery occasionally, but the emphasis is on use of the arms and hands. It is helpful to note that there are both machine and non-machine activities at higher and lower THINGS levels. Some people have preferences and skills which lean toward machinery while others do not. By helping clients to identify their preferences and abilities in this area, we can increase the likelihood of a satisfactory and satisfying person/position match.

Secondly, DPT can be used to identify the occupations within a WTG that are most likely to be suitable for a client.

UNIT XVIII, EXERCISE II

If, for example, a client who had selected WTG 06.01 as his primary interest area did not want to be a supervisor but had a maximum DPT level of .384, you could quickly identify which occupations to explore first.

Look at the DOT data in Section Four and try it. Six occupations "qualify." It may be tiring on the eyes and no where near as efficient as a computer, but it is possible. This activity is a good example of very simple person/position matching.

Check your answers on page 121.

By using your knowledge of Industry Designation and OGA, you could quickly solve even more complicated problems. For example:

UNIT XVIII, EXERCISE III

Mary doesn't know what she wants to do. She is unable to decide between the various WTGs although she did select Business Detail and Clerical Handling as interest areas. You have agreed that she is able to function at DPT level of .362 and she wants to function at that level on a job which is not repetitive. Is this likely? What else could you suggest?

Check your answers on page 121.

You have now completed a review of the eight components in the Qualifications Profile and should be able to see a range of rehabilitation-related uses by combining several of the QP factors to either narrow or broaden a person's occupational focus. Here are two points to remember:

1. The work and qualifications profiles do not contain all the important comparisons between a person and a position. Don't forget work behavior, job satisfaction, and other aspects which may be relevant in specific instances.

2. You may not need to make a person/job match comparison in each factor area with some clients. By thinking about the titles of each factor (e.g., GED, SVP, Aptitudes) you will

frequently be able to identify factors of special concern and focus additional diagnostic and exploration activities in these areas. For example, you might mutually decide to devote more effort to GED or Aptitude areas than Physical Demands and Environmental Conditions. The effective use of DOT materials is as much a matter of selectivity as knowledge!

UNIT XIX

COMPLETING THE VOCATIONAL APPRAISAL SUMMARY (VAS)

Unit Objective: 1. To demonstrate the completion of the VAS as an aid in vocational planning and decision-making.

Introduction

In the previous eight units, you have been using the VAS to record information about yourself and about occupations in which you are interested. Now, we are ready to evaluate the overall results of this effort in much the same way as is done with clients engaged in a rehabilitation planning process.

In actual case practice, the VAS might have been completed somewhat differently:

1. Client and counselor would probably have completed versions of the VAS separately before discussion and comparison. The client would likely have had standardized vocational exploration materials in paper or software form to provide assistance and explanations. The results would be transferred to a VAS form. Meanwhile, the counselor would have used available data and observations to complete a separate VAS form.

2. Differences between the self-ratings and rehabilitation worker's ratings of the client would have been identified and then addressed in discussion. If necessary, further assessment activities might be undertaken. Obviously, agreement on a rehabilitation plan and goal is unlikely without prior agreement about the client's present abilities and needs.

There is considerable value in getting the parties involved to complete separate ratings. It demonstrates client readiness for decision-making, reduces the likelihood of premature consensus-seeking, and serves as an assessment activity in and of itself.

Initially, this approach may seem too time consuming and, perhaps unnecessary. It does, however, reduce the likelihood of false starts on a service plan, contributes to the establishment of a counseling relationship, and focuses the attention of both client and counselor on the factors that need to be addressed if employment is to result from the rehabilitation process.

As you analyze your VAS, step back and examine the work you have done thus far in relation to the Minnesota Theory of Work Adjustment as explained in Unit I:

1. The information contained in columns 2 and 3 of the VAS represent your description of yourself as a worker. More specifically, the information focuses on both your abilities and needs. (Additional information is still needed about the rewards you seek from working; an example of how that might be approached is provided on page 125.)

2. The information contained in columns 5, 6, and 7 of the VAS represent the description of likely demands for ability in the three occupations. (Again, the VAS does not address rewards typically provided by specific occupations.)

3. The circles you drew around occupational demands that differed from your self-ratings represent the discrepancies between your ratings of vocationally relevant characteristics and the typical demands of occupations as recorded in the DOT. Note again that these are NOT the actual demands of specific jobs or positions but rather estimates from the DOT of requirements for minimal, average, successful employment in the occupation based on the job analyses conducted by the U.S. Department of Labor.

These components of your VAS are shown below in relation to the Minnesota Theory:

YOU		OCCUPATION
Abilities (Columns 2 and 3)	(circles equal discrepancies)	Requirements (Columns 5, 6, 7)

Before going further, let's look at the major possibilities for error in the contents of your VAS:

1. Your self-rated estimates might not be consistent with what you have been able to demonstrate in work settings; they might be either too high or too low.

2. Your self-rated estimates might be inconsistent with what you are currently able to demonstrate in work settings; they might be either too high or too low.

3. The DOT estimates of requirements might be inaccurate because they are outdated or because the sample of job analyses was not representative of actual jobs in your area.

The point of examining possible sources of error is that some of the "discrepancies" may not actually exist, while others can be eliminated through careful job placement. Obviously, it is a waste of time and resources to address "discrepancies" that don't exist.

Of equal concern is any attempt to decide that the presence of discrepancies means a "bad job match." Such discrepancies exist in the vast majority of job/person matches. Indeed, perfect job/person matches occur about as often as perfect marriages!

Thus, the presence of discrepancies between personal and occupational characteristics is to be expected and only a signal to begin the next step in career planning. Once the parties know the barriers to success in a given job/person match, they determine the possibilities for - and likely results of - reducing the discrepancies. In most instances, three possibilities are considered:

1. Change the abilities you bring to employment through various development activities such as counseling, physical and mental restoration, and training.

2. Change the job through restructuring or use specialized job placement techniques to locate a situation where the typical demands are not present.

3. Address the discrepancies specific to this particular situation through reasonable accommodation, the use of technology, supported employment, or some other option.

The client and counselor need to consider the best possible combination of approaches to reducing the known discrepancies. Some approaches will likely result in greater long term employability than others; some will require fewer resources and time than others.

Every discrepancy that can be removed improves the job/person match but the parties must decide when residual discrepancies are tolerable. As already noted, some will likely remain.

The parties may decide that a job/person match does not exist if the above approaches to resolving critical discrepancies appear unlikely to work, are not available, or are beyond existing resources. Note that "resources" includes the amount of SVP the client is willing to invest in training or apprenticeship as well as funding.

To summarize, once you have correctly identified the work-related characteristics of a person in relation to the demands of a job, three major options exist for reducing the effect of existing discrepancies:

1. Change the person (counseling, restoration, training),

2. Change the job (restructuring or selective placement), or

3. Reduce the discrepancies (technology, reasonable accommodation, supported employment).

Only after these possible options have been examined by the parties can a decision about appropriateness of the job/person match be determined.

This approach constitutes the essence of client-centered, vocational rehabilitation process and defines the process of service planning. It also contributes to a definition of "informed choice."

UNIT XX

CASE PRACTICE II

Unit Objectives:
1. To provide examples of how DOT materials can be used to assist in rehabilitation casework.
2. To demonstrate the application of previously learned skills in all aspects of the DOT and related materials.

Introduction

In this unit, you are going to continue working with the two clients (Ronald and Alice) whom you met in Unit VIII. You will be asked to review the case history material already presented as well as the results of your earlier efforts on their behalf. Then you will be provided with additional case material and asked to develop some rehabilitation plans for them.

Remember that you now have a great deal of occupationally significant information available to you. The idea is to use it to raise questions which will help you with further assessment and planning decisions.

Ron Palumbo:

1. Please reread the original case data provided in Unit VIII, pages 48-49. You should also read your responses to the exercise on page 50.
2. Use a blank copy of the VAS to record information on Ron. First, enter his name and for Occupation #1, the title of his last occupation. For each of the eight QP areas enter the worker traits for that occupation in Column 5.
3. Information available to his counselor at the time Ronald applied for rehabilitation services has been reproduced on the following nine pages. Read it carefully.

MEDICAL REPORT

Patient: Ronald Palumbo, St. Michael's Hospital Lawton, RI

Admitted 1/5/92 Discharged 2/24/92

DISCHARGE SUMMARY:

CHIEF COMPLAINT: Right-sided weakness and aphasia.

PRESENT ILLNESS: This was a 36-year old, white male who related initially through sign language. Approximately five months ago he had an episode of right neck and head pain with associated diplopia. The symptoms persisted for approximately two hours and then subsided. He apparently had been otherwise asymptomatic. He was married and had been working gainfully. On the day of admission at approximately 1:00 p.m. while at home he complained of dizziness and right leg weakness. He did not experience a period of unconsciousness but vomiting occurred and the patient was brought to the Emergency Room of St. Michael's Hospital arriving at 1:50 p.m. on 1/5/92. His level of consciousness at the time of arrival was described as non-responsive with decerebrate--like movements. Right hemiparesis was appreciated as the patient's level of alertness improved and as late as 2:25 p.m. the patient was talking clearly and moving all extremities, but at 2:45 p.m. the findings of right hemiparesis and aphasia recurred. Patient remained in this state to the time of the initial physical examination.

POSITIVE PHYSICAL FINDINGS: The patient's blood pressure on admission was reported as 120/88, respirations 24, regular pulse of 88, and temperature 100. The patient was a well-developed, well-nourished white male lying in bed. Nasogastric tube was in place. Pertinent findings revolved about the neurological system and were as follows: Patient was alert and responding minimally at the verbal level but had no receptive aphasia. He followed commands directly with left-sided extremities briskly but somewhat incoordinate. The right-sided extremities demonstrated dense hemiplegia as regards the upper extremity but there was some spasticity of the right lower extremity. The deep tendon reflexes were symmetrical. There was no evidence for clonus or Babinski at this time. The patient had a right-sided hypalgesia, including the face, trunk, and extremities. Cranial nerves revealed a left sixth nerve palsy. The pupils were equal at 2 millimeters in diameter and reacted slightly to light. There was no evidence of papilledema in the fundi, no hemorrhages or exudates. The left fundus was somewhat more difficult to see than the right because of the medial deviation of the eye. Patient noted diplopia on visual examination but could count fingers well bilaterally. Visual fields to gross confrontation could not be properly executed. Patient had a right central facial weakness which was marked and the patient's tongue deviated to the right. The gag reflex was slightly depressed.

LABORATORY DATA: Blood studies on admission were unremarkable. The cerebrospinal fluid protein was 21 mg. Copious additional laboratory data occur on the patient's chart as does the spectrum of x-rays. The significant findings in the aggregate of the patient's right brachial angiogram and left brachial angiogram were in the final analysis unremarkable.

COURSE IN HOSPITAL: Following admission, the patient's lumbar puncture was performed and revealed an opening pressure of 140 millimeters of water with clear fluid to the laboratory which was unremarkable. The patient was seen in medical consultation by Dr. Whittier. He was treated initially conservatively with Decadron and bed rest and close neurological observation. He improved progressively to the point where angiography was undertaken and first a left carotid angiogram followed by a right brachial and then a left brachial angiogram in sequential fashion which proved to be unrevealing in the final analysis as regards the etiology of the patient's right-sided hemiparesis. In due course, his urinalysis ruled out E. coli. He was treated appropriately in consultation by Dr. Drew. A CAT scan failed to reveal any significant abnormality. Brain scan was similarly unrewarding. The patient was seen in neurological consultation by Dr. Washington and subsequently in rehabilitation consultation by Dr. Allen. The patient was transferred to the Neurological Service under Dr. Washington's care with progressive improvement of the patient's right hemiparesis to a semifunctional level. The patient was discharged to be followed on an outpatient basis by Dr. Washington and Dr. Allen with appropriate on-going physiotherapy.

CONDITION ON DISCHARGE: Alive and improved.

DISCHARGE DIAGNOSIS: Right hemiparesis secondary to left cerebral ischemic event.

Dictation Date: 5/16/92 Transcribed: 5/22/92

Joyce A Bergeron, M.D.

April 11, 1993

PSYCHIATRIC CONSULTATION--Ronald Palumbo
James W. Allen, M.D.

cc: Dr. Washington
Physical Therapy--Mrs. Lummis
Dr. Fanning
Rehabilitation Counselor--David Gray

Patient walks unlimited distances with short leg brace and a Lofstrand crutch. He has movement of the right shoulder and elbow and a slight finger motion. Motions of the hip and knee are strong with weakness of ankle dorsi flexion. Position sense and pin prick are intact.

Speech articulation is still difficult to understand at times. Ataxia is not present on the left except that rapidly alternating movements at the hand are slow but good at the ankle.

Patient is to continue physical therapy 2X/week. He was told that relatively rapid improvement can be expected for another 3 months and more slowly for about 6 months thereafter.

Patient was encouraged to recontact Dr. Fanning for speech sessions once a week and to contact David Gray for vocational counseling.

Return in 2 months.

James W. Allen, M.D.
Director, Physical Medicine and Rehabilitation

To: Joyce A. Bergeron, Personal Physician 29 June, 1993

Re: Ron Palumbo

Evaluation: Speech/Language

Brief History: Ronald is a 37 year old man who sustained a CVA on 5 January 1992. He was discharged from the Extended Care Unit on 25 March. He served as his own historian for the present information.

Social/psychological: At the time of his stroke Ron had been married about seventeen years. The stresses resulting from his illness have been monumental personally and financially to Ron and his family. His wife, Elaine, has taken a job to ease the financial problems and help pay bills. Ronald is a determined but sometimes stubborn person. This proved to be an asset during his recuperation period since he never gave up trying to get better. However, he has lost a great deal of self-confidence and expressed depression over his present situation. His present goals are to improve his speech and to go back to work.

Language skills: He feels he has improved somewhat since his discharge but finds people very poor listeners. He often gets upset because he has to repeat over and over.

Testing observations: Informal and formal testing revealed him to function adequately in comprehension skills.

Verbal expression was functional in respect to word choice, grammatical skills and sentence length. Articulation skills were moderately involved and generally characteristic of an ataxic dysarthria. The most deviant speech patterns noted were monoloudness and monopitch. Stress patterns tended to be absent because of the pitch and loudness problems. Consonants tended to be imprecise with vowels relatively unaffected. Voice quality was acceptable. Rate tended to be reduced and programmed.

Reading skills were functional. He was administered selected sub-tests of the Durrell Analysis of Reading Difficulty and performed adequately at the 8th grade ceiling level. He stated he hasn't yet been interested in reading anything other than a book on UFOs which he received from a friend.

Writing was performed with his left hand and was described as adequate for his present needs. However, he is not satisfied with his penmanship.

Hearing was screened at 20 decibels and found to be adequate throughout the frequency range. He said that one month ago his hearing was "down but all of a sudden one day I could hear things again - things I never knew were there before." This writer had followed Ron during his hospital stay and hadn't noted a hearing loss.

Summary: Ron is now 5 1/2 months post CVA. He has experienced unhappiness because of being unemployed but feels he has learned to be more appreciative of life in general and is changing for the better.

Comprehension skills are functional; verbal expression is moderately dysarthric characterized by monopitch and loudness. Stress is moderately involved with fluency programmed and choppy. Consonants are more affected than vowels. Reading and writing are functional at a basic level. Hearing is normal.

Recommendations: Overall I feel Ron has a greater potential in speech clarity. He has little insight of his limitations, i.e., what components of his speech make him unintelligible to many people. I feel he is a candidate for speech therapy with goals directed in the areas of auditory discrimination, education, and recognition of the fact that society will not change for Ron Palumbo.

Wilma R. Nutley, Sc.D.
Speech Pathologist

cc: Dr. Allen
Dr. Washington, Dr. Bergeron
David Gray, Rehabilitation Counselor

Nuts and Bolts Counseling Associates
Psychological Review
Ronald Palumbo

July 25, 1992

Ronald is a thirty-seven year old married man who recently suffered a cardiovascular accident which has left him physically disabled. Neurological damage seems to be centered in the left hemisphere of the brain as physical impairment is contained to the right side and to disturbances in speech. Ron has an excellent work history, working his way up from machinist jobs to supervisory positions. Presently he is much depressed by his unfortunate disability and wants to return to work. His physical problems and unemployment create feelings of inadequacy and low self-esteem. His self-image is further depressed by the fact that his wife has had to go to work to support the family.

Intellectually the stroke has detrimentally affected Ronald's functioning within the verbal realm. The results of the Wechsler Adult Intelligence Scale indicate that his overall level of intellectual functioning falls within the low average range, with a full scale IQ of 80. However, the overall IQ is depressed by the lowered verbal IQ of 71. Ronald's verbal skills are presently within the borderline defective range in comparison to other adults his age. His information processing of verbal material and verbal expression have been greatly depressed due to the CVA. His general fund of information and long-term memory are below average, as well as his social judgment. Language development and arithmetic reasoning are borderline; abstract reasoning and auditory short-term memory are defective.

Within the performance realm all abilities measured are average (PIQ-98), indicating normal intellectual functioning of visual-motor skills. Short term memory for visual symbols and ability to learn new material is at an average level of development. Thus it seems that short-term memory difficulties are limited to verbal symbols.

With extensive speech therapy it seems that Ron will be able to increase his ability to communicate. Test results indicate that he is capable of learning new material if he so desires.

____

Abel Tomar

APPLICATION FOR VR SERVICES

NAME: Ronald Palumbo

ADDRESS: 31 Appian Rd., Thomaston, RI

DOB: 3/22/55 AGE: 38

SEX: M VETERAN STATUS: Hon. Discharge

MARITAL STATUS: M S.S. NO.: 097-333-1212

SPOUSE: Elaine AGE: 37 OCCUPATION: Receptionist

CHILDREN:

Name	Age	Health
Paul	16	Good
Joseph	15	"
Ann	6	"

PHYSICAL PROBLEM: My right ankle & hand are weak. I have trouble speaking clearly but most people can understand me now. I had a CVA in January.

HOW DOES THIS LIMIT YOUR ABILITY TO WORK? I can't move around as fast as before, I can't stand up all day. I can't move my fingers fast in my right hand.

WHAT DOCTORS HAVE YOU BEEN TO FOR THESE PROBLEMS? St. Michael's Hospital team

WHAT IS YOUR PRESENT INCOME? SSDI 376/mo
wife's salary 450/mo

EDUCATION: See previous sheets

ARE YOU INTERESTED IN FURTHER EDUCATION OR TRAINING? Don't know - it depends on what happens. Think I've had enough though.

EMPLOYMENT: See previous sheets.

WHAT KIND OF WORK WOULD YOU LIKE TO DO? I'd like my old job back. I was good at it and my boss said I could come back as the guy doing it now wants out by Nov. My boss also said I could try for the tool crib supervisor job if I felt better about doing that. Then this guy I know said there is an opening for a materials handling coordinator where he works. They want someone who knows the metals business. My wife wants me to be a computer operator because thats' big around here. To tell the truth, I don't know what I can do anymore, or want to do either.

I hereby apply for vocational rehabilitation services.

Ronald Palumbo 8/3/93

Signature Date

4. Ron has expressed interest in three occupations besides the one already entered in Column 2 of the VAS. Find the proper base titles, Industry Designation and Worker Trait Groups for two of these occupations. Enter the information on appropriate lines of the VAS. Then, enter the worker traits for those occupations in columns 6 and 7, using information from Appendix G.

Here are some selected case notes from the client's record. 8/5/92 Ron states that he is "sick of being sick" and that he misses being with lots of people every day. He is upset by his family whom he feels is "spoiling me when I can do for myself." He also says that the worst part of the day is when everyone is away at school and work while he is home alone.

Client says he has organized his life because he likes "a good routine where I know what I'm going to do." He works on the house in the morning (painting, replacing floor boards, etc.), takes a long walk around noon, and then helps his sons with their old VW after school. "I mostly tell them what to do so they'll learn." He states that he no longer uses the crutch but carries a cane when outdoors "just in case."

He related being able to assemble a new bike for his daughter. He had no difficulty with the instructions or diagrams but found use of small tools (e.g., screwdriver) the most difficult. "I was sort of slow, but it came out fine." His speech was more easily understandable when describing this activity than when discussing what he wants to do. Client was given self-assessment materials to take home.

8/12/92 Called Mr. Towne regarding re-employment possibilities. He would consider rehiring Ron in his old job, but it requires that he train new workers and be involved in some of the negotiations for new contracts. Actual machine operation and setup isn't required according to Mr. Towne, "it helps to be able to demonstrate." The tool-crib supervisor's job was also mentioned. The tools and jigs weigh 20 pounds or less; there are three workers to be supervised (one per shift); and the record keeping involves inventory and recommendations for new purchases.

Ron was back with the self-assessment materials. He was confident about most of his current ratings (WA 1, 4, 9, 10; WS 3, 8, 10; GED - R & L 4; Apts G, S, & P = 3; V-4; PD L, 4, 5, 6; WC 1, 5.) but unsure of a few. He is uncomfortable with "anything to do with figures and I used to be really good with them." He also has difficulty with the words "routine, definite, organized" and said that he likes to have things organized and well setup, but wouldn't want to do the same task over and over. Also, he said he likes people but "they don't always take the time to listen to me."

8/15/92 Called Dr. Bergeron for a medical update, especially concerning physical capacity. Hasn't seen Ron lately but has appointment scheduled next week. She wants us to tell her what jobs are being considered so that she can decide if he can handle them. Her only other comment was that he "shouldn't do anything too heavy."

5. Using the information now available to you about Ron from the case material just read, complete as much of columns 2 and 3 as possible. You will not be able to complete all items, but will find it possible to extract quite a bit of vocationally relevant information from the case material.

6. Now review and compare columns 2-3 with columns 5-7. Are there portions of the client columns which are blank or in which you put question marks where more information is necessary before helping Ron make sound vocational decisions? If so, circle those areas in columns 2 or 3.

UNIT XX, EXERCISE I

Based on those circles, develop a series of questions to the treating physician, to a vocational evaluator, and to Ron to obtain the information you believe is needed.

- Remember to ask only vocationally relevant questions.
- In wording your questions, remember that the more specific the questions, the more helpful the answers.
- Don't worry about phraseology and writing style - in this exercise, content counts!

A. To Dr. Bergeron:

B. To Coordinator, Valley Comprehensive Vocational Assessment Center:

C. To Ron:

Check your answers on page 121.

Alice Pinkerton:

1. Re-read the case record data (pages 50-51), the exercise (page 52), and the additional material (pages 98-102) regarding Alice. Develop as complete a profile of work-related characteristics as can be determined from available data. Enter it in Column 2. If you have estimates of greater potential, enter them in Column 3.
2. Enter the most likely worker requirements for three of the occupations being considered for her, using Columns 5-7 on a new VAS form.

MAZE UNION HIGH SCHOOL
1 ROYALIST DRIVE
LOYALTON, N.H.

FINAL REPORT: Alice Pinkerton

Since Alice is nearly 21, she will be leaving school having made excellent progress here. A summary of annual testing with the Peabody Individual Achievement Test (PIAT) is provided.

DATE:	4/13/87	4/88	5/89	5/90	5/91
Sub-test	Grade Equivalent	G.E.	G.E.	G.E.	G.E.
Math	1.8	2.1	3.1	3.9	2.6
Reading Rec.	5.4	6.4	8.4	8.1	7.9
Reading Comp.	4.7	4.5	4.2	5.0	5.8
Spelling	5.8	5.6	5.8	6.0	6.7
Gen'l Info.	4.7	6.3	7.2	8.8	7.2
C. Age	15-6	16-7	17-8	18-8	19-8
Total Test	4.3	4.8	5.3	6.0	5.6

We also arranged for Alice to be seen again for intellectual assessment with the following results:

DATE SEEN: 6/6/92 DOB: 9/14/71

WAIS Results

Information	5	Digit Symbol	5
Comprehensive	4	Picture Completion	7
Arithmetic	3	Block Design	4
Similarities	7	Picture Arrangement	4
Digit Span	6	Object Assembly	1
Vocabulary	6		
Verbal Score	31	Performance Score	21

Verbal Score	72
Performance Score	61
Full Scale	65

Our special education staff has supplied this summary of Alice's present situation:

Adjustment of Child to Living Situation: Excellent. Handles all self-care skills ably. Is compatible with authority and peers. Not given to spontaneous initiative in routine chores, but is willing and able when asked. Requires little supervision.

Psychological Report: Not a complicated individual. Her developmental timetable is slow, but not slower than expected for one with her handicap.

Treatment: Alice is constantly being given added responsibility; consequently, she feels responsible for realistic workloads. Socially stable, not requiring treatment. Review of goals with child: Does not project long-range goals - she is short-term goal oriented. May be unable to worry about vocational future. Down's people are notoriously limited in this regard.

School is currently planning with family for termination of enrollment in June, 1992 and for transfer to a vocational program thereafter.

Henry P. Appleton, Coordinator
Special Services Section

WORK ASSESSMENT REPORT: ALICE PINKERTON
COMPLETION DATE: 11/21/92

During the past six weeks, this client has been programmed into the work evaluation room three hours weekly to obtain more baseline data on her capabilities. In addition, her work in the workshop has been monitored more closely, and she has been interviewed on two occasions.

Alice insists that she wants to leave the workshop. She says she wants to "earn more money" and "work on a machine." She puts most of her earnings in a bank account but saves a portion for new clothes and bracelets. She can count and make change in simple transactions.

On the Wide Range Achievement Test (WRAT), she scored at the 5.6 grade level on Reading, 6.1 in Spelling, and 2.1 in Math. On the Minnesota Paper Form Board she achieved a percentile rank of only 15 as compared with the easiest norms available. Her scores on three manual dexterity tests (Bennett Hand Tool, Purdue Pegboard, and Crawford Small Parts) are wide ranging. She did poorest (no score above 25 percentile) on the Crawford, slightly better on the Purdue (scores ranging from the 33-57 percentile), and fairly well on the Bennett Hand Tool Test (45 percentile against general norms).

In the workshop, her production averages 50-65% of that expected of workers considered "ready for placement." Depending on the task, however, this varies from 21% to 22%. She is much more highly motivated when there is a machine involved (any machine!) and does better when her routine is not disturbed. She only complains of fatigue when on a job she dislikes. Her quality also varies according to the job. She has fair to good work habits and does not bother other workers. She has no tolerance for sudden noises or distractions but is not bothered by constant, repetitive noise. She is overly dependent on supervisors but will work very hard in return for praise. Peer relationships are fair.

Alice appears to learn best from demonstration and does not learn quickly or from verbal directions. She generally tries several work patterns or methods, rarely settling on one.

Emil Stanley
Vocational Evaluator

PHYSICIAN'S STATEMENT

Except as noted, no medical condition exists which would preclude the above named individual from participation in work, real or simulated, as part of a rehabilitation or training program.

Muscle tone is not sufficient to allow for heavy lifting, pushing or pulling. Individual may initially experience inability to stand or maneuver longer than two hours without sitting.

A specialist examination of the cardiovascular system is recommended prior to any task other than sedentary.

Sincerely,

J. L. Dougherty, M.D.
Consulting Physician
October 1, 1992

To: Emil Stanley
From: J.L. Dougherty, M.D.
September 9, 1993

As requested, I have re-examined Alice Pinkerton and can offer the following information in the areas mentioned in your phone call on August 13.

Although Alice remains somewhat obese, her muscle tone is much improved since I first saw her. I would still advise against jobs involving heavy lifting, but would think that she could perform jobs which do not exceed 40 pounds or so. There are no medical contraindications to standing. I would suggest that this be left up to her, assuming, of course, that she is given the standard rest periods found in most work places.

She was seen by Dr. Blood, the Cardiovascular specialist, on Jan. 3, 1993. He found no gross abnormalities and approved the diet and exercise regime she was on. I will forward a copy of Dr. Blood's report for your records.

J. L. Dougherty

Staff Notes

1. Spoke with Mr. Grundy at XYZ Shoe. The job of Heel Sorter is a high turnover position apparently because of the speed requirement coupled with the fine discrimination required to see small cracks or defects in the heels. Since it is an entry level job, they have difficulty getting workers who can make the judgments quickly. Mr. Grundy was reluctant to consider a longer OJT program. (Sept. 15, 1993)

2. Talked with Fanny at the restaurant. She showed me the kitchen area which is pretty hectic and crowded. The dishwashing machine is new and semiautomatic. It still requires feeding and filling the soap and rinse cups and routine cleaning of the brushes and drains. It isn't noisy, but the area is. Fanny also showed me the salad making operation which is a simple one, well within Alice's ability. (Sept. 17, 1993)

3. Visited the Aspen Furniture Co. today to view the furniture assembler position. In addition to the usual worker requirements, flexibility would be required because of the variety of pieces to be assembled. Much of their business comes from mail orders and thus a worker might assemble 25 to 30 different pieces in a day. For each, there is a set of specifications which include size of components, assembly sequence, etc. The worker must be able to work from the specifications with little or no supervisory assistance. I was very favorably impressed with the workers and supervisors. They would be willing to consider a longer than usual OJT. (Oct. 1, 1993)

4. Howard Johnson, Manager of the Holiday Inn, called about the building maintenance worker. He wants a person who can do all the setup for sales meetings as well as cleaning. This would require reading the sales orders and setting up correct tables, AV equipment, etc. Besides cleaning the meeting rooms, the worker must keep the entry way open. Lawns and sidewalks are cared for by other workers. (Oct. 1, 1993)

UNIT XX, EXERCISE II

A. In which areas would you want additional information before deciding on a placement?

____

____

____

____

B. If you had to select one of the four placements with the data now available, which one would be most appropriate?

____

Check your answers on page 122.

POSTSCRIPT

This manual has presented a process by which occupational information can be used to organize and synthesize case data by comparing client characteristics with the requirements made on workers in a wide range of occupations. To help you learn the process, you were asked to follow a fairly rigid format, complete a lot of exercises, and appraise your own vocational characteristics. Congratulations! If you are reading this, chances are you stuck with it and finished. Despite this structured approach, we have tried to show how each professional can - and must - adapt the process to the unique circumstances of clients, job markets, and resources. Whether you use any of the forms contained herein, (adapted to your own situation) or use other forms is less important than that you understand how to use occupational information to organize case material and your evaluative/counseling efforts to improve the person/job match.

The Dictionary of Occupational Titles and related materials provide an invaluable resource in vocational decision-making. Most importantly, they provide a useful structure for organizing information about people and jobs. This is, however, only one of several approaches to this professional activity. Professionals need to be conversant with all the major approaches since no one has been shown to be universally applicable. Said another way, "when the only tool we have is a hammer, we treat all problems as if they are nails." Assisting career decision-makers requires a full tool box.

It is neither possible nor professionally sound to apply the material presented herein in a mechanical or numerical way. Without the essential ingredients of a) professional judgment, b) active client participation, and c) current, locally relevant, occupational information, this approach can be dangerously invalid. As presented in this manual, however, the approach offers a needed supplement to more traditional vocational assessment strategies. It has been used with a large number of persons and in a variety of settings for several decades. When combined with good assessment activities in which the consumer is an active participant, the approach has been found to be accurate, functional, and efficient.

Each rehabilitation worker must ultimately decide how to fit the approach and materials into their case practice and work setting. Appendix F contains a model which may prove helpful for deciding when and how to use these materials. In general, persons with prior work history are better served when the career decision-making process begins with a summary of those experiences. On the other hand, persons who have not worked before generally prefer to begin with their interests and personal characteristics.

As you find new uses for the DOT materials, please share them with others.

Charles W. Robinson, Ed.D., CRC
August, 1993

SECTION IV

APPENDICES

APPENDIX A: Definitions

A BOWL OF ALPHABET SOUP

aka	Abbreviation for "also known as."
APTITUDE	The capacities or specific abilities which an individual must have in order to learn to perform a given work activity or task. Also, the quickness or ease with which a task is learned.
DOT	U.S. Department of Labor, Employment and Training Administration. Dictionary of Occupational Titles, Fourth Edition, Revised, 1991. A two-volume edition that summarizes information about 12,741 occupations found in the American economy.
DPT	Data, People, Things. See WFL.
EC	Environmental Conditions. One of the components of QP. The physical surroundings and exposures which make demands on a worker's abilities. Also a method of describing people in terms of the environmental conditions they are able/willing to tolerate on a job.
ELEMENT	The smallest step into which it is practical to subdivide any work activity without analyzing the separate motions, movements, and mental processes involved. Examples: Threading a nut and bolt; Inserting paper into a printer; Selecting appropriate assessment instruments.
FAI	Functional Assessment Inventory, Crewe, N. M., & Athelstan, G. T. Menomonie, WI: Materials Development Center, 1984.
GED	General Education Development. Composed of three divisions, GED includes Reasoning Development, Mathematical Development, and Language development. Math and Language development are tools through which Reasoning ability is expressed.
GOE	Guide for Occupational Exploration. First, a publication currently out of print and reported to be in revision to match the DOT. Second, an occupational classification system by which occupations are groups by interest, aptitude, adaptability, etc. As a classification system, aka WTG.
HAJ	Revised Handbook for Analyzing Jobs. Explanation of the procedures and techniques used by the public employment service to analyze jobs and record the analyses.
IJD	Ideal Job Description, Robinson, C. W. & McAllister, R. M., Sharon, NH: South Hill Publications, 1991.

IND. DES.	A system for organizing occupations by the type of establishment in which they are found. An industry can reflect location, type of duty, product, process, or raw material.
ISI	Individual Skills Inventory, Robinson, C. W. & McAllister, R. M. Sharon, NH: South Hill Publications, 1991
ISP	Individual Service Plans include Individualized Written Rehabilitation Program (IWRP), Individualized Education Plan (IEP), Individualized Transition Plan (ITP) and others that identify vocationally related goals, intermediate objectives, services designed to meet the objectives, and program evaluation methods and criteria.
INTERESTS	See GOE
WRP	See ISP
JOB	A group of positions within an establishment which are identical with respect to their major or significant tasks and sufficiently alike to justify being covered by a single analysis. Examples: Bicycle Assembler at Speedy Bicycle Co.; Typist at Podunk Refitting Co.; Career Counselor at Jiffy Career Change, Inc.
JOB ANALYSIS	Systematic study of a specific job in terms of the tasks performed and requirements made of the workers in terms of worker functions; work fields; materials, tools, equipment, work aids; materials, products, subject matter, services; worker characteristics.
OCCUPATION	A group of similar jobs found in one or more establishments in which a common set of tasks are performed or are related in terms of similar objectives, methodologies, materials, products, work actions, or worker characteristics.
OGA	Occupational Group Arrangement. An occupational classification system by which all occupations are clustered into nine broad categories. Categories are further divided into 83 occupational divisions, Divisions are further divided into 564 occupational groups.
On-the-Job Training	Learning on the job, under a qualified trainer.
PD	Physical Demands. One component of QP. The physical activities required of a worker to meet job requirements. Also a method of describing people in terms of the physical activities in which they are able/willing to engage on the job.
PCQ	Personal Capacities Questionnaire, Crewe, N. M., & Athelstan, G. T. Menomonie, WI: Materials Development Center, 1984.

POSITION	A collection of tasks constituting the total work assignment of a single worker. There are as many positions as there are workers. Examples: John's position as a bicycle assembler; Charlie's position as typist; Mary's position as career counselor.
QP	Qualifications Profile. Generally considered to include eight worker characteristic areas used to describe people in work-related terms: GOE, Temperaments, GED, SVP, Aptitudes, PD, EC, and DPT.
SVP	Specific Vocational Preparation. The amount of time required by a typical worker to learn the techniques, acquire the information, and develop the facility needed for average successful performance in a specific job-worker situation. When applied to people, the term refers to the amount of time they are willing/able to devote to job preparation including time already spent (See HAJ, page 14-4, item 11 for information on the modes of SVP.)
TASK	One or more elements combined to make up a distinct activity that constitutes a logical and necessary step in the performance of a worker. Examples: Mounting and tightening a bicycle chain guard; Preparing correspondence; Assessing clients to determine readiness for career decision-making.
WORKER CHARACTERISTICS	See QP.
WFL	Worker Function Level, aka Worker Functions. One of three components of Work Performed (WP). Worker Functions describe a system by which the extent to which workers are required to relate to Data, People, and Things (DPT). Also a method of describing people in terms of their ability/potential to relate to data, people, and things on a job.
Working Conditions	See EC
WTG	Worker Trait Group. See GOE.

APPENDIX B: Answers to Exercises

Unit I, Exercise I, Page 12

1. position
2. abilities, requirements, rewards, work needs
3. counselor
4. improve, reasonably satisfy, or compensate for residual discrepancies
5. abilities and needs of the person; requirements and rewards of the job
6. a-occupation
   b-job
   c-occupation
   d-position
   e-occupation
   f-task
   g-element

Unit I, Exercise III, Page 15

1. Occupational Yardstick; profile; qualifications
2. direct
3. a. indirect
   b. direct
   c. indirect
   d. direct
   e. indirect

Unit II, Exercise I, Page 19

1. public employment offices; high school students; and VR personnel
2. job analysis
3. interviews
4. people; things; worker functions
   work fields
   MTEWA
   MPSMS
   worker traits
5. definition
   classification
6. occupational group
   industry
   data, people, things
   worker traits
7. job
   occupational
8. characteristics
   particular worker

(Areas in question are marked with *)

HENRY'S OCCUPATIONAL YARDSTICK

Henry's Characteristics & Needs		Demands & Rewards, Host at Drakes Restaurant
Supervise, Coordinate Train, Prepare	WORKER ACTIONS* (does what)	Supervises, Coordinates
Dining Room & Kitchen Staff	IMMEDIATE OBJECT* (to whom/what)	Dining Room Staff
To Provide	INFINITIVE (in order to)	To Provide
A luxurious eating experience for people	GOAL (to accomplish what)	Fast & Courteous service to patrons
Help others, Business contact, Communication of ideas & info.	INTERESTS (preferences for)	Business contact, Recognition of appreciation from others, Communication of ideas & info.
Variety, Directing others, Precise decision-making	WORK SITUATIONS * (Ability to adapt to)	Frequent duty change, Planning & Directing an entire activity, Decision-making on judgement
Interpret data, Read reports & journals	GENERAL EDUCATIONAL DEVELOPMENT* (Reasoning, math & language)	Interpret data with limited standardization Prepare business letter Compute payroll, Records receipts & credits
Doesn't want more schooling. Will spend up to one year as trainee	SPECIFIC VOCATIONAL PREPARATION (Type & duration)	On-the-job training, 6-12 months to learn job and clientele
One hr. standing/ walking, Maximum lifting: 20 lbs., Seeing, talking, hearing	PHYSICAL DEMANDS (Capacities)	Four + hrs. standing/ walking, Twenty lbs. lifting regularly, Seeing, talking, hearing
Inside	ENVIRONMENTAL CONDITIONS (Physical surroundings)	Inside
Above average in intelligence, verbal, low average in clerical; below average numerical	APTITUDES* (Ability to learn to)	Average verbal, numerical, & clerical
High people, average data, low things	DATA/PEOPLE/THINGS* (Relationship to)	High data, average people, low things

Unit III, Exercise I, Page 25

	Base Title	Worker Action	Immed.Obj.	Infin.	Goal
1.	OVERLAY PLASTICIAN	installs	stringers and plywood sheets	to strengthen	boat bottoms
2.	MILLER	tends	mills	to pulverize	mica
3.	BOUNCER	patrols	place of entertainment	to preserve	order & and protect property
4.	FLOCKER	cements	flock	to give	velvety or wooly appearance
5.	HISTOPATHOLOGIST	studies	tissue	to provide	data on body function, cause, and progress of disease
6.	PHYSIOLOGIST	conducts	research	to determine	organ system functions
7.	SUPERVISOR, HISTORIC SITES	directs and coordinates	personnel	to conform	to state policy

Unit IV, Exercise I, Page 31

1. 1237
2. 1287
3. 1315
4. 1286
5. 1303
6. 1389
7. 1361
8. 1287
9. 1323
10. 1294

Unit IV, Exercise II, Page 32

	Occ.Code	Base Title	Title Type	Other
1.	616.685-078	-	BASE	-
2.	617.360-014	SWAGING-MACHINE ADJUSTER	Alternate	
3.	-	-	Term	type of activity
4.	-	-	Term	specific field of specialization
5.	388.663-010	ELEVATOR OPERATOR	Unbracketed	starter supervises operator
6.	764.684-014	-	BASE	prepares barrels for whiskey aging
7.	-	-	Master	operates, places, moves, positions, guides, starts, stops. Classified type of machine, type of garment or part, or machine attachment.
8.	649.685-034	DRILL-PUNCH OPERATOR	BRACKETED	-
9.	199.281-010	GEMOLOGIST	Alternate	-
10.	075.374-010	NURSE, GENERAL DUTY	BASE	Independent contracting for nursing services, usually on a per patient basis.
	075.374-018	NURSE, PRIVATE DUTY	BASE	

Unit V, Exercise I, Page 34

1. 2
2. 3
3. 7
4. 8
5. 4
6. 6
7. 0/1
8. 8
9. 9

Unit V, Exercise II, Page 35

1. a) 12
   b) 92
   c) 51
   d) 77
   e) 45
   f) 93
   g) 65
   h) 14

2. a) Occupations in art
   b) Computing and account-recording occupations
   c) Sales occupations, services
   d) Occs. in machining stone, clay glass and rel.
   e) Occs. in production and distribution of utilities
   f) Hunting, trapping and related occupations
   g) Occs. in fabrication and repair of plastics, synthetics, rubber and rel.
   h) Welders, cutters, and rel.

Unit V, Exercise III, Page 36

1. Decorate tiles, mosaic designs, supervise

2. 7

3. 77

4. 773

5. 773.131-010

Unit V, Exercise IV, Page 37

1. Wood

2. a) process (56)
   b) machine (66)
   c) fabricate and repair (76)

3. a) 250
   b) 902
   c) 771
   d) 723
   e) 185
   f) 312

4. a) Secretary
   b) Drafter
   c) Judge
   d) Utilities Salesperson
   e) Usher

5. a) SLIVER-MACHINE OPERATOR, 521.685-018, TENDS/SLIVER MACHINE/TO SLIVER ALMONDS

   b) EXTRUDER OPERATOR, 614.482-014, SETS UP & OPERATES/EXTRUSION PRESS/TO SHAPE/HOT BILLETS INTO TUBING

   c) ASSIGNMENT CLERK, 215.387-010, ASSIGNS/OPERATING PERSONNEL/TO MEET/COMPANY MANPOWER AND TRANSPORTATION NEEDS

   d) TREE TRIMMER, 408.664-010, TRIMS/TREES/TO MINIMIZE/STORM & SHORT CIRCUIT HAZARDS.

   OR

   LABORER,BRUSH, 459.687-010, CUTS/TREES,BRUSH/TO CONTROL/GROWTH ON UTILITY LINES

   e) STRESS ANALYST, 002.061-030, PLANS & CONDUCTS/STRESS ANALYSIS/TO RESOLVE/PROBLEMS AND DETERMINE SUITABILITY.

Unit VI, Exercise I, Page 40

1. Like most skilled trades, carpenters have DPT levels of .381 meaning that the worker needs to compile data, e.g. Carpenters have to study blueprints (reading) and measure boards before cutting (math).

2. For most jobs, high pay comes with higher worker function levels which in turn require a combination of education, training, and experience.

3. Generally, freedom from constant supervision and freedom to organize your own work is increased as DPT levels become more complex. If a client worked as a helper (.687), is he/she now able to function at .487? Major DATA function increases involve measuring and blueprint reading. Major THING increases are in speed and precision.

4. Both jobs have base titles of "Inspector", but one has significantly higher THING requirements and somewhat higher DATA requirements, while the other has exactly the same DPT level as the former job. Should investigate both jobs, but CAN TECHNICIAN is most likely to require similar skill levels.

Unit VI, Exercise II, Page 43

1.	A.	Boilermaker Helper I	805.687-010
	B.	Boilermaker Inspector	805.667-010
2.		Glass-lathe Operator	674.382-010
3.		Inspector, Paper Products	649.367-010
		Paper-Bag Inspector	649.367-010
4.		Yes	
5.	A.	Cook Helper, Pastry	313.684-010
	B.	9	

Unit VI, Exercise III, Page 44

1. PRINCIPAL 099.
2. 091.107-010
3. TEACHER, SECONDARY SCHOOL 091.227-010
4. TEACHER AIDE I, 099.
5. TEACHER AIDE II 249.

Unit VII, Exercise I, Page 46

1. 1195
2. OGA 1, 2
3. .117-.687
4. 061, 134, 137, 167, 261, 281, 283, 361, 364, 367, 380, 381, 383, 384, 387, 683, 684, 685, 687.

Unit VIII, Exercise I, Page 50

I. a) Redeye Gunner 378.682-010 (military serv.)
comparing, speaking, operating-controlling

b) Flat Polisher 603.685-054 (clock and watch)
comparing, taking instructions--helping, tending

c) Polishing-Machine Operator 603.682-026 (any ind.)
comparing, taking instructions--helping, operating-controlling

d) Grinder Operator, External, Tool 603.280-010(mach. Shop)
analyzing, taking instructions--helping, setting up

e) Supervisor, Grinding 603.130-010 (any ind.)
coordinating, supervising, setting up

2. The military occupation was higher in THINGS than his first civilian job, a not unusual drop. All other jobs represented increases--consistently in THINGS, with two jumps in DATA and a single large jump in PEOPLE. The progress was orderly and logical in an upwardly mobile direction.

3. Blueprint reading skills were essential to getting the Polishing-Machine Operator's job. The course work in supervisory and management related directly to the job as Grinding Supervisor.

Unit VIII, Exercise II, Page 52

a. HEEL SORTER 788.584-010
(boot and shoe)

Sorts and grades/leather heels/(to group for)/discard, reprocessing, shipment, and storage

Examines, groups/heels/(to identify)/nicks, scars, brittleness, etc.

Other Relevant Information: would satisfy her desire to work with hands and to be mobile.

b. FURNITURE ASSEMBLER 763.684-038
(furniture)

Assembles/wooden parts/to form/sections, frames or complete articles of furniture

Other Relevant Information: requires lifting (Alice is "physically small.") Dirty, noisy environment.

Unit X, Exercise I, Page 61

1. 03.03
2. 02.02
3. 01.05
4. 05.03
5. 10.01
6. 12.01
7. 09.04
8. 08.02
9. 06.03
10. 07.07

Unit XII, Exercise I, Page 65

1. Airplane Pilot - VSTJ
2. Piano Tuner - JT
3. Materials Handler - R
4. Sculptor - EJT
5. Clerk Typist - RV

Unit XII, Exercise II, Page 66

D - Teaches, instructs (and likely sets-up programs of instruction) in dancing and theory; May choreograph.
E - Explains and demonstrates techniques.
P - Instructs, observes, demonstrates, explains, drills.
T - Demonstrates dance body movements to conform to musical score.

Unit XII, Exercise III, Page 67

Temperaments	GOE GROUP
1. D, E, P, J	01.04
2. R, T	07.06
3. I, P	08.01
4. P, D	11.07
5. R	06.02
6. S, V	04.02
7. P, T, V, E	10.02
8. S, T, D, J	02.03

Unit XIII, Exercise I, Page 70

Brake Operator II. Both occupations have tasks requiring comparison of work with specifications. Most likely, the occupation with the higher DPT level will require higher levels of math.

Unit XV, Exercise I, Page 75

1. a. GED
   b. SVP
   c. GED
   d. SVP
   e. EXPERIENCE
   f. SVP
   g. SVP
   h. EXPERIENCE
   i. SVP
   j. EXPERIENCE
   K. SVP

2. a. 9
   b. 8
   c. 2
   d. 6
   e. 3
   f. 7
   g. 2
   h. 4
   i. 5

Unit XVII, Exercise 1, Page 79

1. For AIRPLANE INSPECTOR

   The tools are likely to weigh under 20 pounds. (Strength = PD1,L)

   Inspects fit of parts, examines airframe, engine, and operating equipment. (Climbing = PD2; Balancing = PD3)

   Inspects fit of parts, examines airframe, engine, and operating equipment. (Reaching = PD8; Handling = PD9)

   ..using Tachometer, pressure gauges, protractor, micrometers, and calipers. (Fingering = PD10)

   Examines, inspects, collects data. (Near Acuity = PD15)

   WATER-QUALITY TESTER

   Collects waste water samples. (Exposure to Weather = EC1)

   Collects waste water samples. (Reaching = PD8; Handling = PD9)

   Conducts tests, such as pH... (Color vision = EC19)

2. Signals ... to start engines and manipulate controls.

3. Airplane Inspector

4. Airplane Inspector

5. **Airplane Inspector**	**Water-Quality Tester**
Excessive Noise (5)	Excessive Noise (5)
Exposure to Weather (1)	
Proximity to Moving Mechanical Parts (8)	
Working in High, Exposed Places (10)	

Unit XVIII, Exercise I, Page 81

1. less
2. action verb
3. most
4. increases
5. Airplane Inspector

Unit XVIII, Exercise II, Page 82

1.	INSPECTOR-ADJUSTER, OFFICE-MACHINE COMPONENTS	706.384-010 0601
2.	ASSEMBLER, GOLD FRAME	713.384-010 0601
3.	INSPECTOR, EYEGLASS	713.384-014 0601
4.	INSPECTOR, POISING	715.384-018 0601
5.	INSPECTOR, WATCH PARTS	715.384-022 0601
6.	PHOTO MASK INSPECTOR	726.384-022 0601

Unit XVIII, Exercise III, Page 82

1.	CLERK TYPIST	203.362-010	07.06
2.	COMPUTER OPERATOR	213.362-010	07.06
3.	FILE CLERK I	206.362-010	07.07

(Note the inexact match on the last one. Whether it is close enough is a matter for discussion.)

Unit XX, Exercise I, Page 97

A. 1. Can Ronald be cleared for a job in which walking and standing (indoors, on smooth, level surfaces with little or no climbing) several hours a day is required? The walking and standing need not be constant but would probably involve more than half the day with periodic opportunities to sit.

2. Would you recommend a visual examination since the jobs being considered require substantial reading of technical materials including tables, blueprints, etc.?

B. 1. Can Ron perform at average levels in general learning, verbal and numerical areas? Although test data will be helpful, response to this question should also reflect his performance in practical situations.

2. What is Ron's current proficiency in working with tools and equipment? Can he adapt to his weakness on the right side by using jigs, compensatory motions with other body parts, etc.? Of particular concern is his ability to set up machinery such as drill presses and grinders.

3. Can Ron work quickly, accurately, and neatly with numbers, inventories, and records?

4. Can Ron instruct and supervise other people? Of particular concern is his ability to organize material to be taught, and then present it in understandable language.

5. Can Ron tolerate a full day of work where he is on his feet at least half the time?

C. 1. To what extent are you involved in keeping the family finances straightened out? Do you do the banking, bill paying, etc.?

2. Are you improving in your speech and do people generally understand you? Do you find that your speech is better at some times than others?

3. To what extent does noise bother you?

Unit XX, Exercise II, Page 102

A.
- To what extent can the client meet worker requirements in WS 2?
- More information about Alice's GED and that required for the Kitchen Helper position.
- The extent to which the client's spatial relations and form perception aptitudes are intact.
- More precise data concerning Alice's aptitude in K, F, and M areas.
- The client's ability and willingness to handle the environmental conditions of WC 4, 5, 6.
- The extent to which those conditions are actually present in the Kitchen Helper and Furniture Assembler positions.

B. Kitchen Helper

APPENDIX C: Critical Vocational Behaviors

Critical - Each significantly impacts employability.
Vocational - Applicable to competitive, sheltered, and supported employment.
Behaviors - Observable; can be seen, described, and measured.
Reprinted from Krantz, G. "Critical Vocational Behaviors," Journal of Rehabilitation, July-August, 1971

CRITICAL VOCATIONAL BEHAVIORS FOR: ____________________

CRITICAL VOCATIONAL BEHAVIORS	Self-Assess.	Assess. Result.	Work History
	(See page 2 for ratings)		
A. **Job Objective Behaviors**			
1. Has a vocational goal:			
a. is oriented toward employment and having a vocational goal.	________	________	________
b. a clear enough goal to move ahead with planning.	________	________	________
c. can state the goal.	________	________	________
d. can describe the demands and rewards involved.	________	________	________
2. The goal is:			
a. work s/he is willing to do.	________	________	________
b. work he/she is physically, mentally, and emotionally able to do.	________	________	________
c. work for which s/he is qualified.	________	________	________
d. work which is or will be available within commuting distance.	________	________	________
B. **Job-getting Behaviors**			
1. Seeks work frequently enough.	________	________	________
2. Has appropriate interview behaviors:			
a. can present assets to employer.	________	________	________
b. can account for employ. deficits.	________	________	________
c. shows proper enthusiasm.	________	________	________
d. asks appropriate questions.	________	________	________
e. is reasonably free of mannerisms which stigmatize or annoy.	________	________	________
C. **Job-keeping Behaviors**			
1. Attends work regularly (misses less than 12 days per year).	________	________	________
2. Displays appropriate punctuality (late less than 12 times per year).	________	________	________
3. Behaves toward co-workers in ways that:			
a. do not irritate, anger, distract.	________	________	________
b. do not attract abuse/victimization.	________	________	________
4. Behaves toward supervisors to:			
a. demonstrates acceptance of subordinate role in relation to supervisors.	________	________	________
b. creates minimum supervisory overhead by time and attention demands.	________	________	________
5. Produces enough work:			
a. remains at work station as appropriate.	________	________	________
b. maintains adequate production speed - neither too slow nor too fast.	________	________	________
c. sustains effort and shows adequate stamina and willingness to continue exertion against work demands.	________	________	________
6. Meets appropriate quality standards:			
a. recognizes and accepts quality standards as reasonable demands.	________	________	________
b. attends to meeting quality standards, attains, and maintains them.	________	________	________

	Self-Assess.	Assess. Result.	Work History
c. recognizes "good enough" and does not sacrifice speed to needless perfection.			
CRITICAL EMPLOYMENT—COUPLED BEHAVIORS			
D. **Social Living Competencies**			
1. Uses leisure time so that s/he is:			
a. appropriately engaged and occupied and not at loose ends.			
b. satisfied and reasonably content with leisure time activity.			
2. Manages money so that spending does not exceed income.			
3. Demonstrates acceptable grooming and appearance, consistent with setting.			
4. Manages legal problems to avoid excessive wage attachments or adverse publicity as representative of employer.			
E. **Community Living Competencies**			
1. Houses self, finds place to live, and maintains reasonable stability in housing.			
2. Secures adequate medical services:			
a. has a personal physician or is linked to public health service.			
b. takes reasonable care of health, exercise, and dietary needs.			
3. Is mobile in community, using personal or public transportation for employment, personal, or recreational travel.			
F. **General and Personal Living Competencies**			
1. Copes with family and marital relationships so that they do not interfere with employment.			
2. Demonstrates adequate personal adjustment and stability. Does not emit behaviors which interfere with employability.			

EXPLANATION OF RATINGS.

1. Method used to determine ability.
   - D= Demonstrated in independent setting
   - TC= Competency Testing
2. Competency Levels.
   - I= Independently proficient
   - A= Can demonstrate with some Assistance (e.g., reminders, supervision, encouragement, etc.)
   - C= Needs Change/development
     - 1= Change Possible
     - 2= Change Doubtful
3. Sample Ratings: D,C1= Demonstrated, Needs Change which is possible
   TC,I= Independently proficient by competency testing
   D,A = Demonstrated, needs assistance in X area.

APPENDIX D: Minnesota Theory of Work Adjustment

For most people, work is rewarding, that is it meets needs or provides reinforcement. The relative importance of job satisfaction needs may be measured, as in the Minnesota Importance Questionnaire. They may also be estimated as simply more or less important based on personal statement or observation as shown below. For further information, see The Minnesota Occupational Classification System III, R. V. Dawis, et al, 1987

JOB SATISFACTION NEEDS FOR: ____________________

(All Ratings: Y/N)

	Self-Assess.	Assess. Result.	Work History
ACHIEVEMENT			
1. Ability Utilization: could make use of my abilities			
2. Achievement: could give me a feeling of accomplishment			
COMFORT			
3. Activity: could be busy all the time			
4. Independence: could work alone on the job			
5. Variety: could do something different every day			
6. Compensation: pay would compare well with other workers			
7. Security: would provide for steady employment			
8. Working Conditions: would have good working conditions			
STATUS			
9. Advancement: would provide opportunity for advancement			
10. Recognition: could get recognition for the work I do			
11. Authority: could tell people what to do.			
12. Social Status: could be "somebody" in the community			
ALTRUISM			
13. Co-workers: would be easy to make friends with			
14. Social Service: could do things for other people			
15. Moral Values: could work without feeling it is morally wrong			
SAFETY			
16. Company Policies: would administer its policies fairly			
17. Supervision-Human Relations: My boss would back up the workers			
18. Supervision-Technical: My boss would train the workers well			
AUTONOMY			
19. Creativity: could try out some of my own ideas			
20. Responsibility: could make decisions on my own			

APPENDIX E: Vocational Appraisal Summary

NAME: ______________________ DATE: ______________
POSSIBLE OCCUPATIONS #1 # 2 # 3
OCC. TITLE: ____________ ____________ ____________
OCC. CODE : ____________ ____________ ____________
GOE. GROUP: ____________ ____________ ____________

Columns 1	2	3	4	5	6	7
TRAIT AREA	NOW	POSS. CHANGE	RATING SOURCE**	POSS. OCCS.		
				1	2	3
WORK GROUP AREAS (INTERESTS): (Y/N)						
01.Artistic						
02.Scientific						
03.Plants and Animals						
04.Protective						
05.Mechanical						
06.Industrial						
07.Business Detail						
08.Selling						
09.Accommodating						
10.Humanitarian						
11.Leading and Influencing						
12.Physical Performing						
Temperaments: (Y/N)						
D. Direction/Controlling/Planning						
R. Performing Repetitive/Short-Cycle						
I. Influencing People						
V. Variety/Frequent Task Change						
E. Expressing Personal Feelings						
A. Working Alone/In Physical Isolation						
S. Performing Effectively under Stress						
T. Precise Limits/Tolerances/Standards						
U. Working Under Specific Instructions						
P. Dealing with People						
J. Making Judgments and Decisions						
GENERAL EDUCATION DEVELOPMENT: (LO=1;HI=6)						
R. Reasoning						
M. Mathematics						
L. Language						
SPECIFIC VOCATIONAL PREPARATION: (LO=1;HI=9)						
APTITUDES: (LO=5;HI=1)						
G. General Learning Ability						
V. Verbal						
N. Numerical						
S. Spatial						
P. Form Perception						
Q. Clerical						
K. Motor Coordination						
F. Finger Dexterity						
M. Manual Dexterity						
E. Eye–Hand–Foot Coordination						
C. Color Discrimination						

POSSIBLE OCCUPATIONS

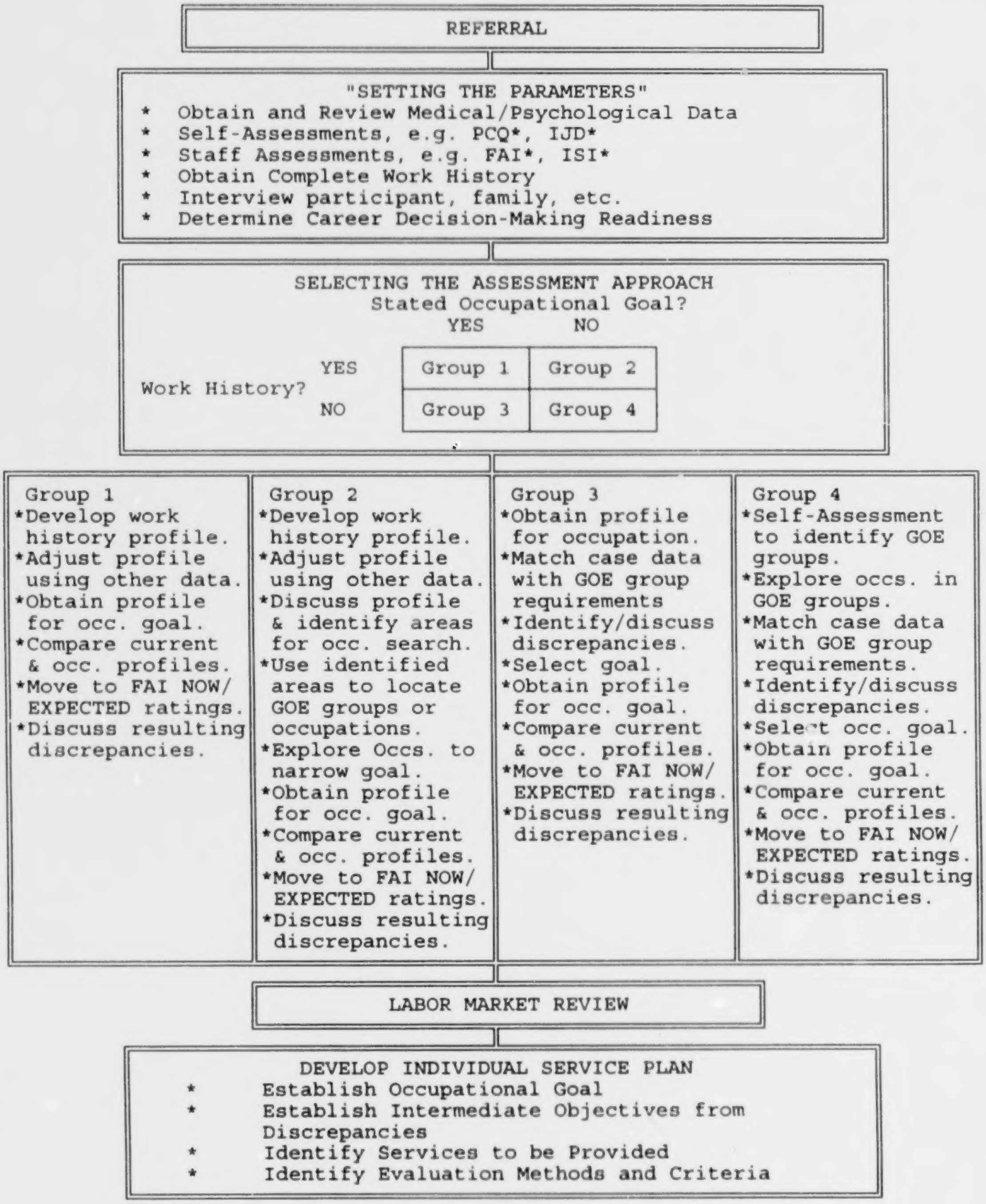
	# 1	# 2	# 3
OCC. TITLE:			
OCC. CODE :			
GOE. GROUP:			

Columns 1 TRAIT AREA	2 NOW	3 POSS. CHANGE	4 RATING SOURCE**	5 POSS. OCCS. 1	6 2	7 3
PHYSICAL DEMANDS: (N,O,F,C)						
1. Strength (S,L,M,H,V)						
2. Climbing						
3. Balancing						
4. Stooping						
5. Kneeling						
6. Crouching						
7. Crawling						
8. Reaching						
9. Handling						
10. Fingering						
11. Feeling						
12. Talking						
13. Hearing						
14. Tasting/Smelling						
15. Near Acuity						
16. Far Acuity						
17. Depth Perception						
18. Accommodation						
19. Color Vision						
20. Field of Vision						
ENVIRONMENTAL CONDITIONS: (N,O,F,C)						
1. Exposure to Weather						
2. Extreme Cold						
3. Extreme Heat						
4. Wet and/or Humid						
5. Noise Intensity Level (LO=1;HI=5)						
6. Vibration						
7. Atmospheric Conditions						
8. Proximity to Moving Mechanical Parts						
9. Exposure to Electrical Shock						
10. Working in High, Exposed Places						
11. Exposure to Radiation						
12. Working with Explosives						
13. Exposure to Toxic/Caustic Chemicals						
14. Other Environmental Conditions						
WORKER FUNCTIONS:						
D. Data (LO=6;HI=0)						
P. People (LO=8;HI=0)						
T. Things (LO=7;HI=0)						

** RATING SOURCE: A. JUDGEMENT AND OBSERVATION
B. REFERENCES AND CASE DATA
C. DEMONSTRATED IN WORK HISTORY

CWR, 1/1994

APPENDIX F - Planning Model



REFERRAL

"SETTING THE PARAMETERS"

- Obtain and Review Medical/Psychological Data
- Self-Assessments, e.g. PCQ*, IJD*
- Staff Assessments, e.g. FAI*, ISI*
- Obtain Complete Work History
- Interview participant, family, etc.
- Determine Career Decision-Making Readiness

SELECTING THE ASSESSMENT APPROACH

Stated Occupational Goal?

Work History?		YES	NO
	YES	Group 1	Group 2
	NO	Group 3	Group 4

Group 1
- *Develop work history profile.
- *Adjust profile using other data.
- *Obtain profile for occ. goal.
- *Compare current & occ. profiles.
- *Move to FAI NOW/ EXPECTED ratings.
- *Discuss resulting discrepancies.

Group 2
- *Develop work history profile.
- *Adjust profile using other data.
- *Discuss profile & identify areas for occ. search.
- *Use identified areas to locate GOE groups or occupations.
- *Explore Occs. to narrow goal.
- *Obtain profile for occ. goal.
- *Compare current & occ. profiles.
- *Move to FAI NOW/ EXPECTED ratings.
- *Discuss resulting discrepancies.

Group 3
- *Obtain profile for occupation.
- *Match case data with GOE group requirements
- *Identify/discuss discrepancies.
- *Select goal.
- *Obtain profile for occ. goal.
- *Compare current & occ. profiles.
- *Move to FAI NOW/ EXPECTED ratings.
- *Discuss resulting discrepancies.

Group 4
- *Self-Assessment to identify GOE groups.
- *Explore occs. in GOE groups.
- *Match case data with GOE group requirements.
- *Identify/discuss discrepancies.
- *Select occ. goal.
- *Obtain profile for occ. goal.
- *Compare current & occ. profiles.
- *Move to FAI NOW/ EXPECTED ratings.
- *Discuss resulting discrepancies.

LABOR MARKET REVIEW

DEVELOP INDIVIDUAL SERVICE PLAN

- Establish Occupational Goal
- Establish Intermediate Objectives from Discrepancies
- Identify Services to be Provided
- Identify Evaluation Methods and Criteria

APPENDIX G: Sample Data from the DOT

```
DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
                GOE    WF  MPSMS           12345678901234567890 12345678901234

001061010 ARCHITECT
          666  8  12111343453 D IV   T  J  LNNNNNNOOONFFNFOFOON NNNN3NNNNNNNNN
                050107 244 701
002061010 AERODYNAMICIST
          666  8  11112333354 D  V   T  J  LOOOOONFFFNOONFONOON NNNN3NNNNNNNNN
                050101 244 702
019261034 LASER TECHNICIAN
          544  7  22222322254    V   T  J  MNNOOONCFFNOOOFNFOON NNNN3NNNFNFNNN
                050305 111 580
041061030 BIOLOGIST
          666  8  11112333343        T  J  LNNOOONFFFOOONFNFFFN ONNN3NNNNNNNNN
                020203 251 732
075374014 NURSE, OFFICE
          553  7  23333333354        T PJ  LNNNNNNFFFOFFNFNNNON NNNN2NNNNNNNNN
                100201 294 924
075374018 NURSE, PRIVATE DUTY
          554  7  22322333344       ST PJ  MNNNNNNFFFNFFNFNOFON NNNN3NNNNNNNNN
                100201 294 924
091107010 ASSISTANT PRINCIPAL
          553  8  22344344455 D I      PJ  LNNNNNNOOONFFNFONNNN NNNN3NNNNNNNNN
                100102 295 931
092227010 TEACHER, ELEMENTARY SCHOOL
          554  7  22344244455 D I      PJ  LNNONNNOOONCCNFONOOO NNNN3NNNNNNNNN
                110201 296 931
094224010 TEACHER, HEARING IMPAIRED
          554  7  22344234455 D I      PJ  LNNNNNNOOFOFFNONNNNN NNNN3NNNNNNNNN
                100203 296 931
099327010 TEACHER AIDE I
          443  6  33344344354          PJ  LNNNNNNFFONFFNFONNON NNNN3NNNNNNNNN
                110201 296 931
151047010 DANCER
          442  7  23323423314     E     J  HFFNNNNFNNNNNNNNNNNN NNNN2NNNNNNNNN
                010502 297 755
153267018 UMPIRE
          443  8  22323445445 D        PJ  LNNNNNNNNNNFFNCCCCCC FNNN2NNNNNNNNN
                120102 295 913
195107038 SOCIAL WORKER, SCHOOL
          553  7  22344344455 D IV     PJ  LNNNNNNOOONFFNONNNNN NNNN2NNNNNNNNN
                100102 298 941
199267038 GRAPHOLOGIST
          433  6  33442244455   I      PJ  SNNNNNNOOONFFNCNNNNN NNNN2NNNNNNNNN
                020401 271 949
199281010 GEMOLOGIST
          443  7  22322433353        T  J  LNNNNNNFFFNNNNFNFFFN NNNN3NNNNNNNNN
                050514 211 611
199361010 RADIOGRAPHER
          444  5  33333433343        T  J  LNNNNNNFFFNNNNFOOFON NNNN3NNNNNNNNF
                050305 201 540
203362010 CLERK-TYPIST
          333  4  33343233355  R      U    SNNNNNNFFFNFFNFNNFNN NNNN3NNNNNNNNN
                070602 231 891
206367010 ENGINEERING-DOCUMENT -CONTROL CLERK
          443  6  33444343455        T     LNNNNNNFFFNOONFNNONN NNNN3NNNNNNNNN
                070503 231 890
206367014 FILE CLERK II
          332  3  33443243355        T  J  LNNONONFFFNOONFNNONN NNNN3NNNNNNNNN
                070503 231 891
```

Sample Data from the DOT

```
DOT CODE  DOT TITLE
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          RML  GVNSPQKFMEC                                      CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS             12345678901234567890 12345678901234
---------------------------------------------------------------------------------

206367018 TAPE LIBRARIAN
          432  4  33443233455        T     LNNONONFFFNFFNFNNFNN NNNN4NNNNNNNNN
               070503 231 891
206387010 CLASSIFICATION CLERK
          332  5  33444344455  R     T     SNNNNNNOFFNNONFNNNNN NNNN3NNNNNNNNN
               070503 231 891
206387014 FINGERPRINT CLERK II
          432  4  33432344455        T  J  SNNNNNNFFFNNNNFNNNNN NNNN2NNNNNNNNN
               070503 231 959
206387022 RECORD CLERK
          322  3  33443343354  R     T     LNNFNNNFFFNNNNFNNNFN NNNN3NNNNNNNNN
               070701 231 891
206387034 FILE CLERK I
          321  3  33444233354  R     T     LNNONONFFFNNONFNNFON NNNN3NNNNNNNNN
               070701 231 891
207682010 DUPLICATING-MACHINE  OPERATOR I
          312  4  33433333355        T  J  LNNNNNNFFNNNNNONNNNN NNNN4NNNNNNNNN
               051005 191 891
207682014 DUPLICATING-MACHINE  OPERATOR II
          211  4  34433343354        T     LNNNNNNFFFNNNNONOONN NNNN3NNNNNNNNN
               051219 191 891
207682018 OFFSET-DUPLICATING-M ACHINE OPERATOR
          312  5  34343433354  R     T     MNNNNNNFFFNFFNFNFFFN NNNN4NNNNNNNNN
               051005 191 891
207685010 BRAILLE-DUPLICATING- MACHINE OPERATOR
          221  2  44444444355  R           MNNNNNNFFFFNNNNNNNNN NNNN3NNNNNNNNN
               051219 192 567
211482014 FOOD CHECKER
          312  3  33344343454  R           SNNNNNNFFFNNNNFNNNON NNNN2NNNNNNNNN
               070602 232 899
211482018 FOOD-AND-BEVERAGE CH ECKER
          322  3  33344343454  R     T     LNNNNNNFFFNNNNFNNNON NNNN2NNNNNNNNN
               050903 232 903
213132010 SUPERVISOR, COMPUTER  OPERATIONS
          544  7  22233244455 D       T PJ  LNNOOONOOONFFNFNNONN NNNN3NNNNNNNNN
               07 06 01 233 893
213362010 COMPUTER OPERATOR
          432  6  33333233455        T  J  LOOOOONFFFNFFNFNNFNN NNNN3NNNNNNNNN
               07 06 01 233 893
213382010 COMPUTER PERIPHERAL EQUIPMENT OPERATOR
          332  4  33434233355        T     LNNONNNFFFNNONONNONN NNNN3NNNNNNNNN
               07 06 01 233 893
213582010 DIGITIZER OPERATOR
          323  5  33343333355        T     SNNNNNNFFFNNNNCNNCNN NNNN3NNNNNNNNN
               07 06 01 231 716
214137010 DOCUMENTATION SUPERVISOR
          433  7  33344344455 D         PJ  LNNNNNNFFONFFNFNNNNN NNNN3NNNNNNNNN
               07 02 04 232 890
214137014 SUPERVISOR, STATEMENT CLERKS
          443  7  33344233355 D       T P   LNNNNNNNFFNFFNFNNONN NNNN3NNNNNNNNN
               070104 232 894
214137018 RATE SUPERVISOR
          433  6  33344344555 D    V     P  SNNNNNNFFFNFFNFNNFNN NNNN2NNNNNNNNN
               070202 232 850
215367010 ASSIGNMENT CLERK
          322  3  33454344455        T  J  SNNNNNNFFFNFFNFNNONN NNNN4NNNNNNNNN
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Sample Data from the DOT

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               GOE    WF  MPSMS            12345678901234567890 12345678901234
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215367014 PERSONNEL SCHEDULER
          433  4  33344233455        T  J  SNNNNNNFFFNNNNFNNNNN NNNN3NNNNNNNNN
               070501 232 898
215367018 TAXICAB COORDINATOR
          322  5  44444344455        T  J  SNNNNNNFFONNNNFNNNNN NNNN2NNNNNNNNN
               070503 232 852
215382014 PAYROLL CLERK
          433  4  33344233455        T     SNNNNNNFFFNNONCNNONN NNNN3NNNNNNNNN
               070205 232 892
215563010 CALLER
          222  2  33444343345  R       P   LNNNNNNFFFNFFNFNNONN NNNN3NNNNNNNNN
               070703 282 899
216132010 SUPERVISOR, ACCOUNTING CLERKS
          444  7  22344233455 D      T PJ  SNNNNNNOOFNFFNFNNNNN NNNN3NNNNNNNNN
               070202 232 892
219387010 ASSIGNMENT CLERK
          333  4  33343344455  R           SNNNNNNFFONNNNFNNNNN NNNN2NNNNNNNNN
               070503 231 861
249367074 TEACHER AIDE II
          333  3  33344343455    V     PJ  LNNNNNNFFFNFFNFONNNN NNNN3NNNNNNNNN
               070102 296 931
249367090 ASSIGNMENT CLERK
          322  5  33444333455    V     PJ  SNNONNNFFFNNNNFNNNNN NNNN3NNNNNNNNN
               070503 282 891
279357058 SALESPERSON, JEWELRY
          443  5  33343333453   I      PJ  LNNNNNNFFFFFFNFNFFFN NNNN2NNNNNNNNN
               080202 292 607
301137010 HOUSEKEEPER, HOME
          432  6  33343444455 D  V     P   LNNNNNNFFFNFFNFNNNNN NNNN3NNNNNNNNN
               051201 291 900
312474010 BARTENDER
          332  3  33344334455  R       P   LNNONNNFFONFFNFNFNNN NNNN3NNNNNNNNN
               090401 291 903
313684010 BAKER HELPER
          211  3  44444544354  R        J  MNNNNNNFFFONNNONNNON NNNN3NNNNNNNNF
               051217 146 384
317684014 PANTRY GOODS MAKER
          322  4  34444443354  R     T     LNNNNNNFFCONNNONNNON NNNN3NNNNNNNNO
               051008 146 903
317687010 COOK HELPER
          211  2  44444443355  R           MNNONNNFCFONOOONONNN NNON3NNNNNNNNO
               051217 146 903
318137010 KITCHEN STEWARD/STEWARDESS
          443  6  33344344454 D  V     P   MNNNNNNFFONFFNFONFON NNNF2NNNNNNNNN
               051201 221 903
318687010 KITCHEN HELPER
          211  2  44544544444  R           MNNFNFNCCONNONNNNNON NOFF4NNNNNNNNF
               051218 031 903
318687014 SCULLION
          211  2  44444543355  R           MNNNNNNCCFNNNNNNNNNN NONO2NNNNNNNNN
               051218 031 911
318687018 SILVER WRAPPER
          211  1  44444444355  R           LNNNNNNCCCNNNNNNNNNN NNNN2NNNNNNNNN
               051218  41 903
319137010 FOOD-SERVICE SUPERVISOR
          433  6  33344344454 D  V     PJ  LNNNNNNFFFNFFFFNNNFN NOOO3NNNNNNNNO
               090502 146 903
```

```
                              Sample Data from the DOT

DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112           11111
               GOE    WF  MPSMS            12345678901234567890 12345678901234
------------------------------------------------------------------------------


323687010 CLEANER, HOSPITAL
          221  2  44544444345  R      U    MONFNONFFONNNNNNNNNN NNNF2NNNNNNNNN
               051218 031 905
323687014 CLEANER, HOUSEKEEPING
          111  2  44444444455  R      U    LNNOOONFFONNNNNNNNNN NNNN3NNNNNNNNN
               051218 031 902
323687018 HOUSECLEANER
          211  2  44444444445  R           HONOOONOFONNONNNNNNN NNNN3NNNNNNNNN
               051218 011 902
378682010 REDEYE GUNNER
          333  3  34433433334       S   J  VNNNNNNFFFNOONFFFNOF CNNN4NNNNNNNNO
               050305 293 370
378682014 SMOKE AND FLAME SPECIALIST
          322  4  34433433334    V  ST     HNNOOOOFFFFFFNOOFNOO FNNN4NNNNNNNNO
               050305 293 372
381687010 CENTRAL-SUPPLY WORKER
          322  4  33444443354    V   T     LNNONNNFFFNNNNFNNNON NNNO2NNNNNNNNN
               051218 031 604
381687014 CLEANER, COMMERCIAL OR INSTITUTIONAL
          111  2  44544544345  R           HONFFFNFFNNOONONNNNN NNNN3NNNNNNNNN
               051218 031 905
381687018 CLEANER, INDUSTRIAL
          221  2  44544544345  R           MOOFOFNFFONNNONNNNNN NNNO3NNNNNNNNN
               051218 031 905
381687022 CLEANER, LABORATORY EQUIPMENT
          212  2  44444444353  R           MNNOOONFCONNONONNNON NNNF3NNNNNNNON
               051218 031 601
381687026 CLEANER, WALL
          111  2  44544544444  R           MOOONONFFFNNNNFOONON NNNF3NNNNNNNNN
               051218  31 905
381687030 PATCH WORKER
          111  2  44544444455  R           LNNONONFFNNNNNNNNNNN NNNN4NNNNNNNNN
               060440  31 361
381687034 WAXER, FLOOR
          111  2  44544534444  R        J  MNNFFNNFFNNNNNNNNNFN NNNN3NNNNNNNNF
               051218  31 905
388663010 ELEVATOR OPERATOR
          221  2  43444434355  R       P   LNNNNNNFFFNFFNNNNNNN NNNN3NNNNNNNNN
               090509  11 969
408664010 TREE TRIMMER
          322  4  34534544325  R    S      HFFNNNNFFFNNNNFNFNNN CNNN4NNNOFNNNF
               030405  56 312
408667010 TREE-TRIMMER HELPER
          111  2  44544544355  R           MNNFFFNCONNNNNFNFNNN CNNN4NNNONNNNF
               030405  56 312
408684010 LAWN-SERVICE WORKER
          322  4  34434434344        T     HNNONONFFFNNNNOOONON CNNN4NNNNNNNNN
               030404   3 969
408684014 SPRAYER, HAND
          322  4  34433434344           J  HOOOOONFFNNNNNOFFNOO CNNF4NFNNNNNNF
               030404   3 969
408684018 TREE PRUNER
          332  4  33434444334        T     MFFONONFFNNNNNNNFNON NNNN3NNNNONNNF
               030405 054 300
408687010 FIELD INSPECTOR, DISEASE AND INSECT CONTROL
          222  2  44443444343        T  J  LNNFFFNFFFNNNNFNNNFN FNNN3NNNNNNNNN
               030204 293 300
```

Sample Data from the DOT

```
DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS                 12345678901234567890 12345678901234

419224010 HORSE TRAINER
          322  7  33433333333    V     PJ  MFFOOOOFFOOOONOFFNOO FNNN3NNNNNNNNN
               030301 296 327
459687010 LABORER, BRUSH CLEARING
          111  2  44544544345  R           HNNCNNNCCNNNNNNNNNNN CNNN4NNNNNNNNN
               030402   4 310
521685018 ALMOND-CUTTING-MACHINE TENDER
          211  3  44543544355        T  J  LNNNNNNFFONNNNFNNFNN NNNN4NNNNNNNNN
               060415  54 306
521685022 BATCH-TANK CONTROLLER
          211  3  44443344355        T  J  LONNNNNFFONNNNONNNNN NNNN3NONNNNNNN
               060415 145 381
521685026 BLEACHER, LARD
          211  2  44445434354  R     T     MNNNNNNFFFNNNNNNNNON NNNN3NNNNNNNNN
               060415 145 385
521685030 BOLTER
          211  3  44444444355           J  LOONNNNFFFFNNNFNNNNN NNNN4NCNNNNNNN
               060415 145 381
521685034 BREAKING-MACHINE OPERATOR
          211  2  44545534455  R           MNNNNNNFFNNNNNNNNNNN NNNN3NNNNNNNNN
               060415 142 393
521685038 BRINE-TANK-SEPARATOR OPERATOR
          111  2  44444444355  R           LNNNNNNFFNNNNNNNNNNN NNNN3NNNNNNNNN
               060415 145 303
521685042 CENTRIFUGE OPERATOR
          222  2  44444444353  R     T     HNNNNNNFFONNNNFNNOON NNNO4NNNNNNNNN
               060415 145 383
521685046 CENTRIFUGE OPERATOR
          222  3  44444444355  R           LNNOONNFFNNNNNFNNNNN ONNN3NNNNNNNNN
               060415 145 381
521685050 CENTRIFUGE OPERATOR
          212  3  44444444354        T  J  LNNNNNNFFNNNNNFNNNON NNNC4NNNNNNNNN
               060415 145 385
521685054 CLARIFIER
          211  2  44444444355  R           LNNNNNNFFONNNNFNNNNN NNNF3NNNNNNNNN
               060415 145 385
521685058 CLARIFIER
          221  3  44444444355  R     T     LNNNNNNFFONNNNNNNNNN NNNN3NNNNNNNNN
               060415 145 395
521685062 CLEAN-RICE GRADER AND REEL TENDER
          211  3  44444444355  R           LNNNNNNFFONNNNFFNNNF NNNN4NFNNNNNNN
               060302  31 381
521685066 COCOA-BEAN CLEANER
          211  2  44444444455  R           MNNNNNNFFONNNNNNNNNN NNNN4NFNNNNNNN
               060415  31 306
521685070 COCOA-BUTTER-FILTER OPERATOR
          211  2  44444444455  R           MNNNOONFFNNNNNONNNNN NNNO3NNNNNNNNN
               060415 145 393
521685074 COCOA-ROOM OPERATOR
          211  3  44444444455  R     T     HNNNNNNFFOONNNNNNNNN NNNN4NFNNNNNNN
               060415 142 393
521685078 COFFEE GRINDER
          111  2  44444444455  R     T     LNNNNNNFFNNNNNONNNNN NNNN4NNNNNNNNN
               060415 142 391
521685082 CORN GRINDER
          211  3  44544544355  R     T  J  MNNNNNNFFOONNNONNNNN NNNF4NNNNNNNNN
               060415 142 301
```

Sample Data from the DOT

```
DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS            12345678901234567890 12345678901234

521685086 CORN-GRINDER OPERATOR, AUTOMATIC
          211  2  34433543455        T  J  LNNNNNNFFOONNNONNNNN NNNN3NNNNNNNNN
               060415 142 381
521685090 CRUSHER OPERATOR
          211  3  44543545455  R           MNNNNNNFFNNNNNNNNNNN NNNN4NNNNNNNNN
               060415 142 392
521685094 CRUSHING-MACHINE OPERATOR
          111  2  44544544455  R           LNNNNNNFFNNNNNNNNNNN NNNN3NNNNNNNNN
               060415 142 305
521685098 CUTTER, FROZEN MEAT
          211  2  44444444355  R           HNNONNNFFNNNNNNNNNNN NNNN4NNNNNNNNN
               060415  54 382
521685102 CUTTING-MACHINE OPERATOR
          321  4  44433434355  R     T     MNNNNNNFFNNNNNFNNNNN NNNN3NNNNNNNNN
               060215  54 393
521685106 DETHISTLER OPERATOR
          321  3  44444444355  R     T     MNNFNNNFFFNNNNNNNNNN NNNF4NNNNNNNNN
               060415 145 387
521685110 DRIED FRUIT WASHER
          111  2  44544544455  R           LNNNNNNFFNNNNNNNNNNN NNNN4NNNNNNNNN
               060415  31 387
521685114 EGG-BREAKING-MACHINE OPERATOR
          111  2  44444444353  R           LNNNNNNFFNNNNNFNNOON NNNF4NNNNNNNNN
               060415 145 382
521685118 EXTRACTOR OPERATOR
          221  3  44444434455  R     T     LNNNNNNFFFNNNNNNNNNN NNNN4NNNNNNNNN
               060415 145 395
549132010 GREASE MAKER, HEAD
          444  8  33344334355 D  V     PJ  LNNNNNNFFONFFNFNNNNN NNNN4NNNNNNNNN
               060401 147 501
549132014 SUPERVISOR III
          433  7  33334444455 D  V     PJ  LONNNNNFFFFFFNFNONNN NNNN4NFNNNNNNN
               060401 147 504
549132018 SUPERVISOR, COAL HANDLING
          433  7  33333333355 D  V     PJ  LONNNNNFFONFFNFNNNNN FNNN4NFNNNNNNN
               060401 147 341
549132022 SUPERVISOR, COKE HANDLING
          433  8  33333343354 D  V     PJ  LONONONFFONFFNFOONON FNNN4NFNNNNNNN
               060401 147 505
549132026 SUPERVISOR, PASTE PLANT
          443  7  33433344444 D  V     PJ  LFNOOOOFFONFFNFNNNNN NNNN4NFFNNNNNN
               060201 147 500
549132030 SUPERVISOR, PURIFICATION
          444  7  23333334354 D  V     PJ  LONONONFFFNFFNFNOFON ONON4NFNNNNNOF
               060101 147 501
549132034 SUPERVISOR, TREATING AND PUMPING
          443  8  23333334354 D  V     PJ  LONNNNNFFFNFFNFNNOON FNNN4NFNNNNNNF
               060101 147 501
549137010 SUPERVISOR, CARBON ELECTRODES
          443  6  33333344455 D  V     PJ  LNNNNNNOOONFFNFNOONN ONON4NONNNNNNN
               060201 147 589
549137014 SUPERVISOR, PREPARATION PLANT
          433  7  33323344344 D        PJ  LONOOONFFFNFFNFNOOON FNON4NFNNNNNNN
               060101 147 340
549137018 SUPERVISOR, SPECIALTY PLANT
          444  7  33333344445 D  V     P   LNNNNNNFFFNFFNFNNONN ONNN4NFNNNNNNF
               060101  41 500
```

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DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS                12345678901234567890 12345678901234
______________________________________________________________________________


603130010 SUPERVISOR, GRINDING
          433  7  33333433355 D         PJ  MNNOOONFFFNFFNFNNNNN NNNN4NNNNNNNNN
               060201 051 540
603280010 GRINDER OPERATOR, EXTERNAL, TOOL
          433  7  33322433355       T  J  MNNNNNNFFFFNNNFNFFNN NNNN3NNNNNNNNN
               060103 051 540
603280014 GRINDER OPERATOR, SURFACE, TOOL
          433  7  33322433355       T  J  MNNONNNFFFNNNNFNFFNN NNNN3NNNNNNNNN
               060103  51 540
603280018 GRINDER OPERATOR, TOOL
          434  7  33322433355       T  J  MNNONNNFFFONNNFNFFNN NNNN4NNNNNNNNN
               060103  51 540
603280022 GRINDER SET-UP OPERATOR, INTERNAL
          433  7  33322433355       T  J  MNNOOONFFFONONFNFFNN NNNN3NNNNNNNNN
               060103 051 541
603280026 GRINDER SET-UP OPERATOR, JIG
          434  7  33322433355       T  J  LNNOONNFFFONNNFNFFNN NNNN4NNNNNNNNN
               060103  51 540
603682010 BUFFING-MACHINE OPERATOR, SILVERWARE
          322  4  33443444355       T  J  MNNONONFFFONNNFNFFNN NNNN4NNNNNNNNN
               060202  51 612
603682018 LINTER-SAW SHARPENER
          323  4  34333443355       T  J  LNNONNNFFFONNNFNFONN NNNN4NNNNNNNNN
               060202  55 552
603682022 MIRROR-FINISHING-MACHINE OPERATOR
          322  4  34433434355       T  J  LNNONONFFFNNNNFNFFNN NNNN4NNNNNNNNN
               060202  51 612
603682026 POLISHING-MACHINE OPERATOR
          322  4  34443544355  R    T     MNNNNNNFFOONNNONONNN NNNN4NNNNNNNNN
               060202 051 373
603682030 DRILL-BIT SHARPENER
          322  3  45433534355  R    T     LNNNNNNFFONNNNFNFFNN NNNN3NNNNNNNNN
               060402 051 552
603685010 BAND-REAMER-MACHINE OPERATOR
          211  3  44444544355  R    T     MNNNNNNFFONNNNFNNNNN NNNN4NNNNNNNNN
               060402 054 549
603685014 BARREL POLISHER, INSIDE
          211  3  44443434355  R    T     LNNNNNNFFOONNNFNOONN NNNN4NNNNNNNNN
               060402  51 373
603685022 BEVEL POLISHER
          222  3  44444443355  R    T     LNNNNNNFFFFNNNFNNONN NNNN4NNNNNNNNN
               060202  51 607
603685026 BIT SHARPENER
          211  3  44433433343  R    T     MNNNNNNFFFONNNFNFFNN NNNN4NNNNNNNNO
               060402  51 567
603685030 BIT-SHARPENER OPERATOR
          211  2  44444444455  R    T     MNNNNNNFFFONNNFNOONN NNNN4NNNNNNNNN
               051202  51 564
603685034 BOTTOM POLISHER
          211  2  44544544455  R    T     LNNONNNFFONNNNFNFFNN NNNN4NNNNNNNNN
               060402  51 589
603685038 BRUSH POLISHER
          211  3  44444444355  R    T     SNNNNNNFFNNNNNFNNNNN NNNN3NNNNNNNNN
               060402  51 607
603685042 BURNISHER
          211  2  44544543345  R    T     LNNNNNNCCFNNNNFNNNNN NNNN3NNNNNNNNN
               060402  51 607
```

Sample Data from the DOT

```
DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS            12345678901234567890 12345678901234
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603685046 BURRER, MACHINE
          211  2  44444543345  R     T     LNNNNNNFFFNNNNFNFFNN NNNN4NNNNNNNNN
               060402 051 607
603685050 DEBURRER
          211  2  44443544355  R     T     LNNNNNNFFFONNNFNNONN NNNN3NNNNNNNNN
               060402  51 618
603685054 FLAT POLISHER
          211  4  44443433355  R     T     LNNNNNNCCFNNNNFNOFNN NNNN3NNNNNNNNN
               060202  51 607
603685058 GRINDER OPERATOR, AUTOMATIC
          211  2  44543544335  R     T     LNNNNNNCCFNNNNFNOONN NNNN4NNNNNNNNN
               060402  51 550
616685010 CHAIN-TESTING-MACHINE OPERATOR
          221  4  44444444355  R     T     LNNNNNNFFFNNNNFNFNNN NNNN3NNNNNNNNF
               060302 212 556
616685014 CLINCHING-MACHINE OPERATOR
          211  2  44444534345  R           LNNNNNNFFONNNNONNNNN NNNN3NNNNNNNNN
               060420 134 580
616685018 COIL ASSEMBLER, MACHINE
          211  4  44444544345  R           MNNNNNNFFONNNNFNNONN NNNN4NNNNNNNNN
               060420 061 559
616685022 FABRIC-MACHINE OPERATOR II
          211  3  44443433355  R           MNNNNNNFFONNNNFNNONN NNNN4NNNNNNNNN
               060402 102 557
616685026 HEDDLE-MACHINE OPERATOR
          211  3  44443544355  R     T     MNNNNNNFFONNNNFNNONN NNNN3NNNNNNNNN
               060402  54 567
616685030 KNITTER, WIRE MESH
          222  2  44443433355  R     T     MNNONONFFFNNNNFNNONN NNNN4NNNNNNNNN
               060402 165 557
616685034 LOAD TESTER
          222  3  34433345355  R     T     LNNNNNNFFFNNNNFNFNNN NNNN4NNNNNNNNN
               060302 212 559
616685038 METAL-SPONGE-MAKING-MACHINE OPERATOR
          211  3  44443444355  R     T     MNNNNNNFFONNNNFNNONN NNNN3NNNNNNNNN
               060402 163 541
616685042 MULTI-OPERATION-FORMING-MACHINE OPERATOR II
          211  2  44444534355  R     T     MNNNNNNFFFNNNNFNOONN NNNN4NNNNNNNNN
               060402 102 554
616685046 PAPERBACK-MACHINE OPERATOR
          211  3  34433543355  R     T     LNNNNNNFFFNNNNFNNONN NNNN4NNNNNNNNN
               060409 171 557
616685050 POCKET-MACHINE OPERATOR
          211  3  44443433355  R     T     LNNNNNNFFFNNNNFNNONN NNNN3NNNNNNNNN
               060420 162 464
616685054 RIVETER
          211  2  44444444345  R           LNNNNNNFFONNNNNNNNNN NNNN4NNNNNNNNN
               060420  61 584
616685058 RIVETING-MACHINE OPERATOR
          211  2  44444534345  R           MNNNNNNFFONNNNFNNNNN NNNN4NNNNNNNNN
               060420  73 463
616685062 SCROLL-MACHINE OPERATOR
          211  2  44444544455  R     T     MNNOOONFFONNNNNNNNNN NNNN4NNNNNNNNN
               060402 135 554
616685066 SLAT TWISTER
          111  2  44544544355  R           MNNNNNNFFONNNNNNNNNN NNNN3NNNNNNNNN
               060402 134 463
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Sample Data from the DOT

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DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
                  GOE    WF  MPSMS         12345678901234567890 12345678901234
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616685070 SPIRAL SPRING WINDER
          211  3  44443543355 R            LNNNNNNFFONNNNFNNONN NNNN3NNNNNNNNN
                  060402 163 557
616685074 SPIRAL WEAVER
          222  3  44443433355 R       T    LNNONONFFFNNNNFNNONN NNNN4NNNNNNNNN
                  060402 164 557
616685078 SWAGER OPERATOR
          211  2  44444534355 R       T    LNNNNNNFFONNNNNNNNNN NNNN4NNNNNNNNN
                  060402 134 617
616685082 SWEEP-PRESS OPERATOR
          211  2  44544544355 R            LNNNNNNFFONNNNNNNNNN NNNN3NNNNNNNNN
                  060402  55 607
616685086 WIRE COINER
          211  3  44443433355 R       T    MNNNNNNFFFNNNNFNNFNN NNNN3NNNNNNNNN
                  060402 134 618
616685090 ZIPPER CUTTER
          211  2  44443534345 R            LNNNNNNFFFNNNNFNNNNN NNNN3NNNNNNNNN
                  060402  54 618
617360010 BRAKE OPERATOR I
          333  6  34333434335         T  J HNNONNNFFFNNNNFNFFNN NNNN4NNONNNNNN
                  060202 134 554
617360014 SWAGING-MACHINE ADJUSTER
          332  6  33433433355     V   T  J MNNONONFFFNOONFNOFNN NNNN4NNNNNNNNN
                  060102 134 374
649367010 INSPECTOR, PAPER PRODUCTS
          322  5  34443444453         T  J LNNONNNFFFOOONFNOOFN NNNN4NNNNNNNNO
                  060301 212 470
649685010 AUTOMATIC-MACHINE ATTENDANT
          211  2  44444444345 R            MNNNNNNFFFNNNNFNFONN NNNN4NFFNNNNFO
                  060404 062 474
649685014 BAG-MACHINE OPERATOR
          211  3  44434544354         T  J MNNFOONFFFNNNNFNFNON NNNN4NNNNNNNNO
                  060404 102 474
649685030 COUNTING-MACHINE OPERATOR
          211  3  44444444355 R       T    HNNFNFNFFONNNNFNFNNN NNNN4NNNNNNNNN
                  060404 221 474
649685034 DRILL-PUNCH OPERATOR
          211  2  44444444345 R            MNNFNNNFFONNONFNONNN NNNN4NNONNNNNN
                  060404 053 470
649685038 EMBOSSING-MACHINE TENDER
          211  2  44443444355         T  J MNNONNNFFFNNNNFNNNNN NNNN4NNONNNNNN
                  060404 192 485
674382010 GLASS-LATHE OPERATOR
          332  4  34433433344         T    MNNONNNFCOONNNFNFOFN NNON4NNFNNNNNO
                  060208 081 587
674662010 STONE-LATHE OPERATOR
          422  7  34333434354         T  J HNNNNNNFFFOOONFNFFON NNNN4NOONNNNON
                  060208 057 537
674682010 FINISHING-MACHINE OPERATOR
          312  4  34433433355         T  J LNNFNNNFFFNNNNFNNNNN NNNN3NNNNNNNNN
                  060202 057 538
692260010 MACHINE SETTER
          333  6  33333333344     V   T  J LNNOOONFFFOOONFNFOON NNNN3NNNNNNNNN
                  060102 102 538
692360010 ASSEMBLY-MACHINE-SET-UP MECHANIC
          333  5  33332334345     V   T  J MNNONONFFFOOONFNFNON NNNN3NNNNNNNNO
                  060102 111 581
```

Sample Data from the DOT

```
DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML       GVNSPQKFMEC                                 CONDITIONS....
                                                    11111111112           11111
               GOE    WF  MPSMS             12345678901234567890 12345678901234
-------------------------------------------------------------------------------


692360014 BRUSH-MACHINE SETTER
          332  5  34333434355        T  J  MNNFNFNFFFNOONFNFONN NNNN4NNNNNNNNN
               060102 102 619
692685010 ABRASIVE-BAND WINDER
          211  2  44443433335  R     T     LNNNNNNCCCNNNNCNCNNN NNNN4NNNNNNNNN
               060420  63 538
692685014 ADHESIVE-BANDAGE-MACHINE OPERATOR
          221  3  34433433353  R     T     LNNNNNNFFFNNNNFNNOON NNNN3NNNNNNNNN
               060405  62 604
692685018 AIR-HOLE DRILLER
          211  2  44444433355  R           LNNNNNNFFFNNNNFNONNN NNNN3NNNNNNNNN
               060403  53 619
692685022 BEAD PREPARER
          211  3  44444443355  R           HNNNNNNFFFONNNONNNNN NNNN3NNNNNNNNN
               060407 063 519
692685278 DIAPER MACHINE TENDER
          332  4  34433433345  R     T     LNNONONFFFNNNNFNNFNN NNNN4NNNNNNNNN
               060409 102 449
692685282 LAMINATOR, PRINTED CIRCUIT BOARDS
          221  3  44543434355  R      U    MNNNNNNFFFNNONONOONN NNON3NNNNNNNNO
               060409 063 587
692685286 MOLDER, AUTOMOBILE CARPETS
          211  3  44533533255  R      U    LNNONNNFFFNNNNFNNNNN NNNN4NNNNNNNNN
               060409 132 431
692685290 TRACK LAMINATING MACHINE TENDER
          111  2  44444444354  R      U    MNNONNNFFFFNNNFNFNFN NNNN3NOONNNNON
               060409 054 601
692686010 ASSEMBLY-MACHINE OPERATOR
          211  2  44444434355  R           LNNNNNNFFFNNNNFNNFNN NNNN3NNNNNNNNN
               060420  61 617
706384010 INSPECTOR-ADJUSTER, OFFICE-MACHINE COMPONENTS
          323  3  33333432233  R     T     LNNNNNNFFFNNNNFNFFFN NNNN3NNNNNNNNN
               060104 211 571
713384010 ASSEMBLER, GOLD FRAME
          212  2  44534533355  R           LNNNNNNFFFNOONFNOONN NNN3NNNNNNNNNN
               060104 102 605
713384014 INSPECTOR, EYEGLASS
          332  5  33332433353        T J   SNNNNNNCCCNNNNCNOCFN NNNN3NNNNNNNNN
               060104 212 605
715384018 INSPECTOR, POISING
          3224 3  34432532355       T  J   SNNNNNNCCCNNNNCNNCNN NNNN3NNNNNNNNN
               060105 212 607
715384022 INSPECTOR, WATCH PARTS
          323  6  33332332355        T J   SNNNNNNFFOONNNFNOONN NNNN3NNNNNNNNN
               060104 212 607
721484010 ELECTRIC-MOTOR WINDER
          322  6  34333433354  R     T     MNNNNNNFFFNNNNFNOOON NNNN3NNNNNNNNN
               060223 111 582
721484014 FIELD-RING ASSEMBLER
          322  6  34333443354  R     T     MNNNNNNFFFNNNNFNOOON NNNN3NNNNNNNNN
               060223 111 582
721484018 INSULATION CUTTER AND FORMER
          322  3  34344434345  R     T     LNNONONFFONNNNFNONNN NNNN3NNNNNNNNN
               060232  57 582
721484022 SKEIN WINDER
          322  5  34333432354  R     T     LNNNNNNFFFNNNNFNFFON NNNN4NNNNNNNNN
               060232 111 582
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Sample Data from the DOT

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DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                   11111111112          11111
              GOE     WF  MPSMS                12345678901234567890 12345678901234
-------------------------------------------------------------------------------

721684010 ARMATURE-WINDER HELPER, REPAIR
          211  3  44443544445  R               MNNONNNFFFNNNNFNONNN NNNN3NNNNNNNNN
              051216 111 582
721684014 ASSEMBLER, CARBON BRUSHES
          321  4  34443433355  R     T         LNNNNNNFFFNNNNFNFNNN NNNN3NONNNNNNN
              060223 111 582
721684018 COIL CONNECTOR
          322  5  34332433254  R     T         MNNNNNNFFFNNNNFNFNON NNNN3NNNNNNNNN
              060232 111 582
721684022 ELECTRIC-MOTOR ASSEMBLER
          221  3  44444532354  R     T         LNNONONFFFONNNFNOOON NNNN4NNNNNNNNN
              060423 111 582
721684026 SPIDER ASSEMBLER
          422  6  34333434344  R     T         MNNNNNNFFONNNNONONNN NNNN3NNNNNNNNN
              060223 111 582
726384022 PHOTO MASK INSPECTOR
          434  6  33322223353       T  J       LNNNNNNFFFNNNNFNNFFN NNNN4NNNNNNNNN
              060105 212 507
763684034 FINISH PATCHER
          321  4  34443443353  R     T         MNNONNNCCFFNONFNNCCN NNNN3NFNNNNNON
              051001 102 460
763684038 FURNITURE ASSEMBLER
          322  4  34444433355  R     T         MNNFNNNFFFFNNNFNFFNN NNNN4NOONNNNNN
              060222 102 460
763684042 HARDWARE ASSEMBLER
          211  3  44444444354  R     T         LNNFNNNFFONNNNFNOOON NNNN3NFNNNNNNN
              060422 102 460
763684046 LAG SCREWER
          222  2  44444544355  R     T         LNNFNNNFFFNNNNONNNNN NNNN4NNNNNNNNN
              060423 071 460
763684050 LAMINATOR, HAND
          211  3  34434544355        T         MNNNNNNCCNNNNNCNNNNN NNNN4NNNNNNNNN
              060422 063 460
764387014 MATERIAL INSPECTOR
          433  5  34343344455        T  J      LNNOONNCCNNNNNCNNNNN ONNN4NNNNNNNNN
              050706 102 452
764684010 BARREL BRANDER
          211  2  44434444355  R     T         MNNNNNNFFNNNNNNNNNNN NNNN4NNNNNNNNN
              060437 192 454
764684014 BARREL CHARRER
          211  4  44444444455  R     T         MNNNNNNCCNNNNNNNNNNN NNNN4NNNNNNNNN
              060418 141 454
764684018 BARREL RAISER
          211  4  44444534345  R     T         MNNONONCCNNNNNONONNN NNNN4NNNNNNNNN
              060422 061 454
764684022 COOPER
          311  5  34433544355  R     T         MNNFNNNCCONNONCNCFNN NNON4NNNNNNNNN
              051001 102 454
764684026 HOGSHEAD COOPER I
          211  2  44544543355  R               HNNFNNNCCCNNNNFNNNNN NNNN4NNNNNNNNN
              060422 102 454
773131010 PASTER SUPERVISOR
          432  7  33433333353 D  V      PJ     MNNNNNNFFFNFFNFNFNFN NNNN4NNNNNNNNN
              060201 061 534
788584010 HEEL SORTER
          322  4  34443444454  R     T         SNNNNNNCCFONNNCNNNCN NNNN3NNNNNNNNN
              060302 212 522
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```
                             Sample Data from the DOT

DOT CODE  DOT TITLE
          GED SVP APTITUDES.. TEMPERAMENT. PHYSICAL DEMANDS.... ENVIRONMENTAL
          RML     GVNSPQKFMEC                                   CONDITIONS....
                                                    11111111112          11111
               GOE    WF  MPSMS            12345678901234567890 12345678901234
------------------------------------------------------------------------------


788584014 MARKER, HAND
          211  2  44444543354        T     LNNNNNNCCCNNNNCNNNON NNNN4NNNNNNNNN
               060427 241 522
805667010 BOILER HOUSE INSPECTOR
          311  6  34443444455        T  J  LNNNNNNFFFNFFNFOFNNN NNFN4NNNNNNNNN
               050701 102 568
805687010 BOILERMAKER HELPER I
          211  2  44444544355    V         HFFOOOOFFNNNNNNNNNNN ONNN4NNNNNNNNF
               051212 102 554
921133018 MATERIAL-HANDLING SUPERVISOR
          432  7  33334334355 D  V     PJ  LNNNNNNFFONFFNFOOONO ONNN4NNNNNNNNN
               051201 011 565
979687018 PLATE GAUGER
          221  3  44443443355        T  J  SNNNNNNFFFNNNNFNFFNN NNNN3NNNNNNNNN
               060302 212 567
979687022 SCREEN PRINTER HELPER
          211  2  44544544454  R           MNNFNNNFFFONNNFNONON NNNN4NNNNNNNNO
               060434 191 752
979687026 TYPE-COPY EXAMINER
          221  2  44442344455        T     SNNNNNNFFFNNNNFNNFNN NNNN3NNNNNNNNN
               060302 211 567
979687030 INSPECTOR, FURNITURE DECALS
          211  2  44433444454  R     T     MNNNNNNCCCNNNNCNNCCN NNNN3NFNNNNNNN
               060302 212 752
979687034 GENERAL WORKER, LITHOGRAPHIC
          222  1  44444433344    V         MONOOONFFFNNONOOOOOO NNNO5OOONNNNON
               051219 191 480
979687034 GENERAL WORKER, LITHOGRAPHIC
          222  1  44444433344    V         MONOOONFFFNNONOOOOOO NNNO5OOONNNNON
               051219 191 480
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